Vol. 22.

Field Book

of

W. L. Jepson

1910

Return to W. L. Jepson,
2704 Hillegass ave., Berkeley, Cal.
and receive reward.

Vacaville, Sept. 11, 1910.

— Eschscholtzia californica —
Marked a number of plants along railroad East of Vacaville as follows:

Gen. Sit.	No. plants	Specific place of stake with ref to Tel. poles etc.
Opp. Davis place N. side RR	3	5-8 ft W. of pole 1/17/22
Opp. Davis	3	10 ft. W. pole 1/16. one on bank 2 close together and 5 ft. from fence.
N. side R.R.	1	near & just E. of pole 1/32
" " "	1	30 ft E. of pole 2/4
	11	near pole 1/23
	2	" " 1/27, 1 by old post stump + 1 betw. last + 2d pole west
	1	3/4 south of wagon road one N. side bank.
	1	Pole 1/32, one N. side R.R. 1/2 way to next pole East. (

Cont. 3 pp. ahead.

Berkeley to the Black Hills via Orinda, Sept. 18, 1910.

- Old Madroña trees in cañon N.-west of Orinda, the cañon that opens on to the junction of the roads, i.e. at foot of Wildcat Creek road), hollowed and flared at base, 2 ft. diam at 6 ft, main top gone as shown by dead and broken remains of it.

- Saw Coyote, the first I ever happened to see here in the Berkeley Hills. Since he knew I had no gun he seemed rather in a hurry – but after a bit a hound came along with an occasional cry as he followed the fresh scent.

- Valley Oak, trees rather frequent in the valley cañon of the San Pablo near Orinda, a few large trees, one south of Orinda, one across the cañon from the schoolhouse at foot Wild Cat Creek Road on an open gentle slope, as one goes toward mouth of Bear Ck., another north of the upper waters of Lauterwasser Ck.

- Went up to the top of the white points which crown the Black Hills. Some very pretty deep sharp cañon with high narrow lateral spurs falling off sharply into them. Very varied and romantic cañons. The brush is Chamise, Adenostoma fasciculatum, Baccharis pilularis, etc

Berkeley

No. 4173. Chrysopsis
Grizzly Pk, Sept. 18, 1910.
orig no. = 4175

No. 4174. Eschscholtzia californica Chm.
No. 4174A " "
Taken at Vacaville along R.R. East as indicated in table below.
These spms. are typical of marked plants and represent light-yellow flowers of summer.

Gen. Sit.	No. of plants	Specific Situation
Enclosed portion of railway ground, N. side track	1.	Half-way between 2/8 & A. and 2/9 poles
	1	12 ft. W.-SW. of pole 2/9
	1	20 ft. W. of pole 2/9
orig. no = 4176	5	in a cluster 30 ft W. of 2/9 and 6 to 8 ft. from fence

No. 4175. Taken along RR East of Vacaville throughout whole area of marked Eschscholtzia californica.

Oct. 1910.

– I. J. Condit, San Luis Obispo Polytechnic, says: "Pinus muricata along Coon Ck. and at head of Diablo Cañon; on coast W. of San Luis Obispo town. P. radiata on the hills immediately back of the village of Cambria; much cut nowadays for fuel. Not at San Simeon Bay so far as I know".

Condit visited me about three weeks ago. I made the above as correction in mss Fl. W. Mid. Cal. at the time and noted loccs. on contour maps.
– Sept. 28, 1910.

– Blue-brush = Ceanothus divaricatus (cf. Bot. Cal. 2, app.).

Berkeley.

— Dr. Georg Karsten, came to Berkeley about Sept. 15. with his wife. He has been at Bonn but is called to Halle. About 50 years old, stocky build, agreeable man and evidently a strong well-trained man. His nose is a bit curious, large but as if flattened along the bridge.

— Dr. Meinecke, says Jeffrey Pine wood is better than Yellow Pine, does not warp or crack so badly. Has been in the Sierra Nevada a few mos. and has been keen on the quest of a definite difference between Pinus ponderosa and Jeffreyi and is now ready to give it up! — Oct. 8, 1910

Oct. 1910.

— biscoea pacifica. There is a record of its collection on Olema Ck, with details, by Miss Eastwood, in Erythea, VI, p. 117. This record has a peculiar and amusing interest in relation to the record made in vol. 21 of this Field Book, p. 70.

Mrs. B. did not stop to consider whether it was or was not in Marin but only that she disliked Moore and that he could not have collected it there.

— F.M. Anderson was in today bringing Celtis reticulata from Caliente Canon. We fell discussing Miocene climate. He says that the Miocene beds run along that east edge of the San Joaquin crossing the rivers (Kern River) but making a long dip up Caliente Ck. and then back towards Teha-

Berkeley

chapi. There are beds of diatomaceous rock (white and light) 1000 ft. in thickness. These must have been laid down in quiet waters. What a brooding time was that in the Upper San Joaquin! He has a Miocene bed that is undoubtedly Miocene as Calicut — i.e. fixed by the marine shell deposits. Now if the plants there could be det. & correlated with the beds at Ione, Coaral Hollow, etc, it would be a great feast for paleo-botany in California — Oct. 13, 1910.

— Miss Crane, ex Bot. 4, who amuses herself with seed-testing, etc says "they speak of me as that woman botanist". I am no botanist, but if I were let them leave off the prefix. !!

Oct. 1910.

— The rains broke this year on October 11 & 12, quite a fair deluge. A North wind, as usual, came the third & fourth days but now it is clouding again — Oct. 15, 1910.

— H. A. Greene says: "Just been in the Santa Lucias after Abies venusta seed, scarce and hard to get. Cones too ripe — go to pieces at a touch. Difficult to get good seed. California Chickadee collects the seed and stores it. A lot of the seed is not good but all the seed which they store are good. They store in crevices and hollows of the trunks.

I am Vice President of the California Fish and Game

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Protective Association. We are going to work this year to have the legislature take the protection off tree and pine squirrels on account of their great increase and the damage they do to cones. They cut off the Sugar Pine cones before they are ripe. The seedlings from the Monterey Cypress tree at Pt. Lobos with the very large cones and large rembas are unusually virile" — Oct. 17, 1910.

Greene has become flooded with this Tree-growing Club work. The Federation of Tree Growing Clubs has grown rapidly (a mushroom growth in great part, doubtless). Greene admits that the matter

Oct. 18, 1910.

has in some places acted like a fad and has not stuck. He has sent tree seedlings as far as Scotland with success! Says, what I have observed also, Pinus muricata grows slowly at the start (as do most pines) but that Pinus radiata jumps right off from the start.

— Umbellularia californica — drupes on the ground now; abundant on the ground + colored, Oct. 29. and for ten or fourteen days, some at least. It is early for them as I have associated the purple-covered ground with Dec. or Jan. storms.

Niles (Cal. Nursery Co)

– Bot. 4. trip to Niles. Mr. Correo or Correa, one of the men, says: Sequoia sempervirens trees made from cuttings will not sucker or not sucker so badly as seedlings. Such trees are stockier. Suckering is one of the difficulties in seedling trees. Sequoia gigantea will not set roots from cuttings.

– Cedrus atlantica and libani, the latter grows more slowly but we put in a stake and go by the label since individuals of the latter often grow as much as the former. There is a glaucous form of deodara

Oct. 22, 1910.

which is very beautiful.

– Abies nobilis (var ——, a hort. form I think), grows very slowly. Plants 25 years old were about 3 ½ ft. high. One student asked why it grew so little!

– Correo, I think, referred to some high-montane trees that did not do well here at this low altitude.

– Austrian Pine and Laricio Pine – a fine row of each, both with 2 stiff needles. The Monterey Pine grows much faster than the Austrian row which is 15 years old and say 8 ft high. The Monterey were

Niles

six years old and taller.
- Sequoia gigantea, as fine a tree as in the Bay Region, or finer, 50 ft. high and 25 yrs. old. Stands near the office.
- Cornus ?capitata, labeled C. mascula. Remarkable tree bearing heavily large fruits coalesce into a globular fleshy scarlet head. Not ill-tasting.
- Eucalyptus globulus - a bushy form, 3 ft. high now, seedling, remarkable for its globose outline and not slender erect or irgate type of ordinary seedling.

Oct. 22, 1910.

Berkeley

- Quercus agrifolia. Acorns from tree in "first arboretum" show large 2 or 3 seeds; some acorns shows seeds with 3 cots. - Bot. 4 class. This may be a duplicate note and the facts recorded previously (3 or 4 wks. since). If so the previous note is fuller & better. - (Nov. 2, '10]

- Urtica lyallii doubtfull distinct from U. dioica. - Torrey, X, 228

(see 2 pp. ahead)

- Sequoia gigantea, the tree which set ovulate fls. 2 years ago, i.e. a year ago last Feb. (but look up exact date above) has small cones 1 in. longer, no larger than they were in Apr. I should say. Not yet open on tree but contain sterile seed!
- Rhus diversiloba, alt. range to 3500 ft. southern Sierra Nevada. over

Berkeley.

cont. Dudley, Sierra Club. Bull. 3, 304 - Eucalyptus - fire at Deaf & Blind Institute - machine shop building - a great wooden structure - made a great hot fire - the flames licked into the Eucalypti - in particular into one tree, a large tall tree near the flames. This tree did not burn. Ground fires ran up the stringy bark of the trunk but eventually went out, above. Nor did the other trees take fire. The great Eucalyptus had its foliage so dried by the heat that a branch once puffed into flame but went out. It seemed to me that the forest protected the dry hill beyond. - Oct. 30, '10

Oct. 1910.

- Sequoia gigantea. See 2 pp. back. It is to me almost incredible that the cones should have been pollinated. No staminate flowers were produced and the nearest tree is 1/8 mile away. Not an impossible distance to be sure but the trees are so few. Yet tho' not pollinated as shown by the sterile seed, the cones went on developing and became as large as Redwood cones! The seed is as large as good seed or only a trifle smaller. - All this refers to the tree near the Botany Bldg - the westerly however of the two.

Berkeley

– Brigham, Director of the Bishop Museum in Honolulu, called this morning. A great big jolly fine looking old fellow, bushy white beard, white long hair and bald pate. Everything is fun to him. He has a humorous or interesting side to every incident and every thing which has a history. "The olive thrives there but does not even flower. The flowering time of the native thing depends on the dry season and is variable being about 10 mos. He talked about bread fruit and the way to cook it – if not ripe enough it

Nov. 11, 1910.

is like sour dough, if too ripe it is alcoholic, if just right it is splendid. The Alligator Pears are very variable when raised from seed. The Durian smells to drive everybody out of the city but if you can hold your nose until you get started to eat you'll last because I believe with many others that it is the most delicious fruit I ever tasted." I think he said the Jack Fruit did not do well. Mangoes he spoke of. Also Deliciosa monstrosa. Grapes (Isabella) can be had any time of the year by proper pruning.

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Better than the Isabellas in California. He said the Durians at Malacca were hung to the mast top as the smell would drive the people off the deck. Brigham invited me most cordially to come to the islands on a visit.

-Rhamnus californica, counts of parts in flowers.

Shrub	No. of fls on plan of 5	No. of fls. on plan of 4.
No. 1.	96	2
No. 2.	69	3
No. 3.	56	2
	221	7

Out of the 228 fls. counted, 221 were on plan of 5, 7 on plan of 4. a ratio of 1 to 32.

— Edw. L. Moore, Bot. 4. 2d half - 1910-11.

Nov. 1910.

— Anita Blake says: "There is a columbine on Howell Mt., fls. larger than in the common one, far more sticky, flowers later, we saw it in Sept., the spurs cut off more at an angle" — Oct. 1910. =A. tracyi

— Lewisia tweedyi: Purdy says this has leaves to 6 in. long, that the root-crown is branching and that the whole rosette may be 17 in. broad!

— Nov. 17. Purdy called. Cal

— Laurel Oak. Jack Lyman says this is his name in Napa valley for the Quercus wislizenii. The local name in use there: I am not certain that "Laurel Oak" is really in use for Q. chrysolepis as indicated in my "Trees Cal." — May, 1911.

Vacaville

- Lee Gates says: "About 600 cords a year has gone out of this supervisor district to feed the plains valley people. That may be a little low. Not counting Sunsin or about Winters. I am counting only hard wood [native growth] not peach or other orchard wood. I got out 60 cords this year. It's mainly Live Oak, Iron Oak and Manzanita. The Live Oak sprouts again 7 times out of ten, the Iron Oak doesn't sprout or very rarely. It may when very young but not after it gets

Nov. 26, 1910.

any age, say 13 or 14 years. Manzanita doesn't sprout after we cut it off. Nor does it sprout after a fire has run over it, if it is a good hot fire and hot enough to kill through the bark.

Iron Oak grows very slowly. Live Oak grows rapidly and in 5 years there is more wood to harvest. As a matter of fact we have taken 3 good crops in 29 years. The Christmas Berry sprouts freely. The Oaks on the valley floors made a lot of wood. Probably there was more wood used 25 years ago than now. Some ↑

Vacaville,

people use coal and some, indeed many, use orchard wood." [For 60 years the amount harvested from this district would be 36,000 cords. Probably the total amount from the county is not under 75,000 cords.] Ralph Platt thinks the above estimate low. Of this years crop he has 75 cords in his yard now - for sale. He says that years ago the Galbraiths way below Denverton used to come up with a trail wagon and take out 12 cords at a trip.

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- Quercus lobata, "2 kinds one with slender acorn, finely divided leaf and tall slender trunk; the other with fat acorn, broader leaf and stockier low-branching trunk. We had a tree of each kind on the old home ranch and I knew them perfectly well" - R. H. Platt.
- "Indian burying ground" on Adams Creek, (old Indian village site?) ¼ mile above Foree Ranch on S. side creek in bend of creek - the soil dark, a different colored patch (1 acre) from the surrounding yellowish (or country) soil. Asclepias speciosa peoples the patch

Vacaville, Nov. 26, 1910.

with a dense colony but the orchard trees have all died out of the patch! or refused to grow from the start! It is quite a remarkable sight to see this barren patch in an orchard.

— Eschscholtzia californica, the lot of plants which I marked, see p. 1 above, are now growing rankly, being ½ to 1 ft. high, dense tufts, without rains practically. These are indubitably the same plants from which I secured the summer-time straw colored fls., partly because I marked some of the individuals and

Vacaville, 1910.

partly because the old stems are still in evidence. It is quite remarkable that there should be these two distinct crops of Eschscholtzia and that it has never been scientifically determined. Probably all Eschscholtzia plants here do not have two crops. Most likely towards the coast there may be but one crop normally, as there may be every sort of variation or gradation between one crop forms and two crop forms.

Berkeley

- Carl Purdy lectured on Bulbs and Bulb-culture before the Berkeley Gardening Association last evening. He gave a good lecture and it was no trouble for him to talk because he's always brimfull of the subject. His discourse was very orderly.

He spoke of the great range of variation in the native Irises. Of his species which overlap near his garden, The Terrace, Iris californica and douglasiana. I think he said, resulting in great variation." I could pick 1000 flowers and

Nov. 4, 1910.

no two exactly alike in color".

He says that Brandlinis prostratus roots at the tip in the spring when the snow is going off and that is the time to take cuttings and not attempt to transfer whole plants.

- Ralph Hoddin says:

Shakemakers never have any money. People in my country learn to say: "Just like a shakemaker" or of a fellow going to the bad: "He's just like a shakemaker" or "Getting to be like a shakemaker". Good shakemakers make $1000 in a season, but they never have any left the next season. They begin

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work when the snow goes off in the spring or even when the snow is still on the ground, and they work until snow falls. Above North Fork is a steep high and inaccessible wilderness country. The roads all wash out with the first storms and there is now way of getting provisions in or shakes out. Moreover Sugar Pine will turn blue if not and then the shakes will not sell. Old shakemakers can tell a Sugar Pine fit for riving by the bark or the twist of it. They are seldom fooled. A thin-barked tree is no good for shake making as it is

Nov. 16, 1910.

twisty. They cut out a block out of the side of the trunk to see if it will work. Sometimes they are fooled in this as the lower part of the trunk may be straight and the upper part twisted. Sometimes the sap is straight and the heart twisty or the heart straight and the sap twisty. The latter is most often the case where there is a difference in sap and heart. A tree may be "tender" so that in riving the board will split off when half-way down or pull out. This is due to brashness and not to crooked grain. A Sugar Pine log left on the ground is practically

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ruined for lumber by next spring. Some companies carry them in ponds over winter and that isn't so bad but left on the ground is fatal.

The Indians love the acorns of [Quercus douglasii] for bread. They will go a long way to get a good tree bearing heavily. Some years the crop is very light. The acorns are black.

Fire runs through the brush with great rapidity on some occasions when conditions are right. As fast as a horse can go.

The "black live oak" burns furiously. One can hear

Nov. 16, 1910.

it crackle 2 or 3 miles

Douglas Fir in that region warps very badly. A 2×4 will warp so as to make a seat to go around a tree! It must be piled and weighted. — Ralph Hoddin, Botany 4.

— Mrs. Kate J. Stirring (nee Jared) is a daughter of Lorenzo Jared. Lorenzo Jared was the local botanist at Estrella so long, Estrella, San Luis Obispo. Mrs. Stirring has come in to bring a bundle of his ferns for the Herbarium & tells me that her father died, in Santa Barbara Co., about a year ago. — Jan. 17, '10

Berkeley

–"Chamaebatia foliolosa, burns readily with a suffocating smoke; tends to choke out reproduction, and replaces grass entirely." – E. A. Sterling, On back of a forest service photo. in fire-burned area

"Seedlings of pine which escaped fire because growing in Squaw Carpet (Ceanothus prostratus) which resists fire well and forms a good seed bed." – E. A. Sterling, l.c.

– The tree is a mighty unwilling witness.

Jan. 28, 1911.

– Mr. Wilson of the California Door Company says: We sawed into a sugar pine tree opposite the undercut expecting it to fall. It did not fall and we sawed on through. It stood there! And we could not wedge it over! So in the afternoon (or the next day?) the men came back and felled another pine so as to lead it over. In this way it was brought down. It was a true 6 ft. in diam. and 115 ft. high.

– Lemmons, The. See a "write-up" in James' Heroes of California Geo. Wharton. Pub. 1910. circa.

Berkeley

-Poison Oak. Mr. Nichols takes it frequently and rather seriously, especially in right eye, due to use of right hand probably. He says that on those occasions when he has faithfully and carefully washed himself in water and soda on returning from the field that the poison has not developed. Does not think it was mechanically removed but saponified. Of course this is not proof since he might not on such occasions have been exposed but as he passed through the thickets this

Feb. 17, 1911.

vein is improbable.

The rewearing of clothes worn in the field is undoubtedly the cause of infection in certain cases

- Barrow says: Sensitive plants in Mexico, wonderful display; after rain marvelous change. Some extremely sensitive; blow your breath on them like that and they will close up like that [closing his fist]! Yes. Some of them are very small.

- Acer glabrum. - Pruitt, nurseryman, 4001 Seattle, Wash. says: "This maple ("Blood Maple") has beautiful spots on it.

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These spots first appear when the leaves come out of the bud. The leaves are very beautiful and I have no trouble selling them (the trees) at $1 to $3 apiece; but when they are taken into the gardens of those rich millionaires at Seattle the spots disappear or rather do not appear. Now if I could keep it variegated it would be a fine thing. How can I do that? The tallest one I have seen is 20 ft. high and 4 in. in diameter at the trunk. I have had seeds in sandbeds for two years and no germination. The seeds are still good.

March 7, 1911.

The seeds are very hard." I answered: "The spots are due to a rust. The rust may have a cycle in two or three different species and so it does not appear on your trees in cultivation. It might be that you could by suitable means bring about infection". Pruitt spoke of the differences in the bark of these two maples: the red glabrum and the green circinatum, and the differences in the winter buds.

— Teratology. Solanum umbelliferum. Collateral union of 2 fls. Corolla lobes = 9. Calyx-lobes = 8. Stamens = 10, the 10th stamen situated between the 2 pistils. over—

Berkeley.

Found in Bot. 3 material, Mar 13, 1911. - Strawberry Cañon. Preserved dried.

- Clark, Galen. Noted in S.F. Chronicle, 1st page, issue of October 8(!) The year was 1909? probably but maybe a year either way.

- Climate. Cloudburst on the San Joaquin. Pac. R. Press, Jan. 9, 1909.

- Coast Range hills. Spring Art Exhibitions. Jordan Coletto has an exhibition at Gumps. His things are characteristically of the sun-lit barren slopes with trees in the gullies and wrinkles. He has more enthusiasm for that sort

March, 1910.

of thing than any other of our California painters and he does it very well. All his canvases were made in Marin Co.

I have come to the conclusion that Keith doesn't amount to shucks. Long ago he painted some things which were fine but the canvases characteristic of Keith are just as if he had daubed a lot of brown paint and made a smear. There are two such canvases at the S.F. Institute of Art, Spring Exhib. Then compare two at the opp. end of the room. One "Summer Morning" * is of chaparall uplands rising from a cañon flat, with oak trees in foreground, the

* By Hanson Puthuff.

San Francisco

range running back into the far distance with gullies and small opens. It is a truly fine thing and truly true to what it represents. I have never before seen anything like it in the representation of Coast Range chaparral on a broad scale. "The Oak on the Bank" by Wm Wendt is almost as good. A small arroyo with an oak root at all dominating the picture running to hills in background. Also plainly Coast Ranges. "Dawn", Elmer Wachtel is good and looks like Coast Ranges, too. All three of above have same treatment.

March, 1911.

- Neuhaus has an exhibit at Vickerys - all things of the Mendocino coast. The two best are Westport, the dark low village with the smoke of the chimneys scudding off to landward, the gut of the Ocean breaking into a cut of the cliffs and a spill of wildflowers running down over the bank to meet it, the Gilias, Poppies and Cotyledons; the other is Cliffs at Westport, a fine study of the eroded cliffs, the village dark and windswept nestling on top. He's got it in him, I guess. He has some Madronas in "Spring Pastures" but he doesn't

Berkeley

know how to do 'em, altho they are not really bad.

– Latimer has a Redwood bit in his "Early Morning, Guerneville" which is very good. Much better style than Keith's Redwoods anyway.

– R.E. Smith says:
"Juglans rupestris, in Ariz. has a large and rather smooth nut. It differs very decidedly from the California Black."

When I asked what were the botanical differences he hesitated only an inappreciable moment and then said: "Well, that tree at Vaca-

April 3, 1911.

ville is an Arizona Black. It is on the Harbison place. It has large nuts. It looks different from the California Black in bark color and in other particulars."

As I recall the conversation only ½ hr. since Smith seemed to be telling about considerable differences or rather a considerable list of differences but I cannot tell what they are now(!) save that they were horticultural (in the sense that a horticulturist would notice these points rather than a botanist).

The facts which appealed to me as good I remember in

Berkeley

detail. E.g. He has planted bal. Black nuts from the north (taken from cult. trees mostly but also from the Wooden Valley grove) alongside bal. Black from the south. The trees are side by side at Whittier. The Southern Black branch low, with a straight erect main axis, but with strong laterals from the ground giving the young tree a pyramidal effect. The Northern Black is erect, spindling, not having strong branches or scarcely any. The Southern Black is healthy and vigorous, the Northern Black takes the yellows badly, the worst-

April 3, 1911.

of all being the Wooden Valley seedlings. The Southern Black lose their leaves late and get a new crop very shortly; the Northern Black lose their leaves early (2 or 3 months before the Southern Black) and push out foliage much later in the spring.

The Harbison tree hybridizes freely with English walnut. About 40 per cent of the nuts regularly show hybrid seedlings. This hybridizing spontaneously has gone on freely in the south and is going on.

There is an Eastern Black (Nigra) tree with us in S.

Berkeley

balif. that is known to have been grown from eastern seed and is about 50 yrs. old. It produces rough nuts but the next generation nuts are smoother. In fact environment is breaking up this type in the second generation and third generation and we get all sort of variants and departures. We don't get anything that is like the parent; that is genuine Nigra.

"In Texas the rupestris minor has a very small nut. The nuts sent me are about the size of two peas. They are very small and not very rough. Texas also has the true Nigra and there seems to be every gradation between the large nuts of Nigra and the small nuts of rupestris minor. The Arizonan rupestris major seems to be a different thing.

April 3, 1911

– Lonicera involucrata. Shrubs in fl. now 2 weeks at Berkeley. Ovary mostly 3-celled. I find them also 2-celled. – Apr. 4, '11.

– Lonicera involucrata. Ovary equally 2 or 3-celled. 30 fls. examined by Mrs. Wright, Bot. 4. – about half of them 3-celled, the rest 2-celled. – Apr. 6, 1911.

St. Helena

- Lupinus nanus — the top of the raceme whitish-flowered through the conspicuousness of the white spot on the banner. This white spot changes rather suddenly to purple and very soon after one, by mere feeling of the flowers, senses the growing young pod. Is the changing of color exactly contemporaneous with fertilization? Would the corollas change color if the flowers were castrated?

Apr. 16, 1911.

- Nemophila maculata, in Mendocino County says Mrs. D.O. Hunt. She has a deep purple white-tipped corolla (a nemophila with) She calls villosa. Sent from England.
- Plagiobothrys
  Stems radiating — ascending from base. very marked feature at this time. The corolla with a narrow fold running from the crown to each sinus. *
- Rosa gymnocarpa, in fl.
- Dipsacus fullonum, established along roadways.
- Platystemon californicus - fields solid with it!!!

* Ansinckia has no such folds, its corolla funnelform. (A. intermedia).

Vacaville

For full-fl. spms see nos. 4174-4175.

No 4176. Eschscholtzia californica, crocea type. Specimens taken from definitely staked and wired plant that in 1910 bore small straw-color or yellow flowers in Sept. See nos. 4174-4176. Torus reddish

No. 4177. Eschscholtzia californica Torus whitish, crenulate border. Also taken from staked plants as in case of no. 4176.

No. 4178. Eschscholtzia californica. This plant marked with iron spike + wired. 21 is 4 ft. north county road fence, opposite Hawkins red gate (cemetery field), 3 notches in fence on 2d board. Petals a little yellowish at tip, otherwise golden. Two iron spikes were put in on north side clump of plant.

No. 4179. Eschscholtzia californica. East of post 64 (half-white pole) on north side railway track and half-way to next post, 12 feet south of fence and opposite a fence post marked with three

April 26, 1911

vertical gashes III.

No. 4180. Eschscholtzia californica Golden type

Plant marked with spike and wire, 5 posts west of pole "1/16" on north side railway track and not far from the north & south county road.

—On April 27. I went up the railway track in the direction of Brown's Valley. The low rolling clay hills or rather rolling plains were in their glory. Flowers were everywhere and in particular the mass effects were at their best. The fields showed to great

Vacaville, Apr. 30, 1911.

advantage the "gold lakes" and "snow lakes" under a cloudless sky. The winter rains form broad but shallow lakes or pools. These are of brief duration but sufficiently persistent to eliminate all vegetation except one species adapted to such conditions. Consequently in one place we have the lake filled with the million white flowers of Allocarya; again with the gold of Lasthenia or Baeria there are gold lakes, the borders as sharp against the green fields as the lake itself. Likewise the broad shallow surface stream beds are now filled or marked out by gold with all sorts of delicious bays and inlets.

No. 4180. Stipa setigera. Sonoma Valley

Sonoma Valley, Apr. 30.

(near Glen Ellen) alt. 275 ft.

No. 4181. Grass. Stipa setigera Nutt.
A common species in flats.

No. 4182. Linanthus ~~acicularis~~ androsaceus Greene
Open woods.

No. 4183. Grass. Deschampsia danthonioides Munro.

No. 4184. Peucedanum macrocarpum Nutt.

No. 4185. Phacelia imbricata Greene. = P. calycosa (Gray).
A. is a small plant growing on the bank in a rocky place
B. is a large plant with the inflorescence so much more developed and the plant so much larger that it looks a different species; in good soil.

No. 4186 Grass. Festuca meglura Nutt.

No. 4187. Orthocarpus densiflorus. Benth.

Sonoma Co.

Sonoma Valley, apr. 30.
(near Glen Ellen) alt. 275 ft

No. 4188. Eschscholtzia californica Cham.
golden.

No. 4189. Ranunculus muricatus
Sonoma Valley, low places in
fields. (Eldredge).

No. 4190. Vicia sativa L.
Banner pinkish (or blush);
keel and wings red-purple.
In drying the banner becomes
blush, the wings and keel
black.

No. 4191. Trifolium tridentatum
Lindl.
— Orthocarpus — the low fields
about Schellville and southward
were wonderful wide stretches of
color with yellow of O. castilleoides
(?) and densiflorus (?) predom. But only
seen from train. Ought to be
botanized!!!

Berkeley, May, 1911.

— Pehr Olsson Seffer has been
shot by insurrectos 60 mi.
w. of Mexico City acc. to a
report in the Oakland Enquirer,
Monday evening, May 1.

— Umbellularia californica —
the monthly leaflet of the Cal.
Develop. Board (apr. 30, 1911)
announces the projecting of
a large veneering mill at
Pepperwood. If so, this means
the death of the fine groves
on the Eel.

(continued from p. 56.

Tooth Harper (of Wisconsin) to
Sonoma Valley to see the flower show
spread out for leagues. He was vastly
impressed.

— Lupinus nanus — pods have blue
or black, or blue-black seeds. Should
be looked into and grown in garden.

Santa Clara Co.

Mt. Hamilton

4200 ft.

No. 4192. Trifolium = T. dichotomum H. + A. dichotomum H. & A. var. turbinatum Jepson. Mt. H.

No. 4193. Plagiobothrys nothofulvus Gray. Mt. H.

No. 4194. Gilia dichotoma Gray. Linanthus dichotomus Mt. H.

No. 4195. Baeria

This makes the golden slopes that one sees everywhere on unwooded ridges at this season. It makes a deep golden color that is very fine, like beaten metal, not with the metallic sheen of the California Poppy. I could easily make out the gold of this on slopes six miles away, 12 miles in both directions !!

May 6 - 8, 1911.

No. 4196. Gilia Linanthus ambiguus ambigua Rattan. Corolla light blue, drying dark blue. Closing about 4 o'clock in afternoon and opening tardily the next morning. Mt. Hamilton Forming extensive patches = { Linanthus rattanii Gray.

No. 4197. Dodecatheon hendersonii.

Smith Ck. 2150 ft.

— Snow, on Mt. Hamilton is rather deep at times in winter, drifting to eaves of the little boarding house. It breaks the Digger Pine trees by its weight and is responsible, often, for their ragged outlines, acc. Wright. [— was the guest of Astronomer Wright at the Observatory.]

† William H.

Santa Clara Co.

Mt. Hamilton 4200 ft.

– Chaparral on mt. Hamilton is: Quercus wislizenii var. frutescens; Quercus chrysolepis, forming rather fine thickets north of the observatory; Ceanothus cuneatus; Garrya fremontii; Ceanothus sorediatus H.&A.

A foliage branch of the Quercus scrubs makes a fine torch, says (W. H.) Wright, especially in the dry summer period. These shrubs have remarkable old root crowns. The stems may be 2 or 3 inches thick only, but at base one may make out a table-like crown, 1, 2, 3 ft.

May 6–8, 1911.

broad. Circles of Manzanita scrub and of Black Oak are easily made out on the way to the Aquarius Spring.

– Cerasus demissa on top of mountain. Note its scarious caducous bractlets.

– Pinus ponderosa, fine trees 125 to 145 ft. high. 14 ft. 4 in. circ. at 5 ft. 3500 ft. elev.

– No. 4198. Collinsia
Pale flowers. Very hairy in throat. Smith Creek. 2150 ft.

No. 4199. Trifolium gracilentum T. & G.
Mt. Hamilton.

Santa Clara Co

Mt. Hamilton

4200 ft.

No. 4200. Ceanothus sorediatus H.+A. Mt. Hamilton.

No. 4201. Trifolium tridentatum Lindl. Mt. Hamilton.

No. 4202. Iris macrosiphon Torr. Mt. Hamilton, lower slopes towards Smith Ck. 2300 ft.

No. 4203. Arenaria macrophylla Hook. Mossy rock outcropping, N. slope, under trees. Mt. Hamilton.

No. 4204. Ceanothus cuneatus. Nutt. Mt. Hamilton. Notice the small umbels.

No. 4205. Compositae. Lower slopes Mt. H.

May 6-8, 1911.

No. 4207. Phacelia breweri Gray. Scales of corolla narrow, obtusely free at tip. Ovary very hairy. Style cleft half way.

No. 4208. Linanthus androsaceus (Greene) Corolla lavender. Style exserted. Stamens or rather anthers barely exserted. On shifting gravel slides or sandstone or slate slides. Top of Mt. H.

No. 4209. Phacelia phacelioides (Gray) Three plants only. Corolla whitish. Stamens deep in tube, closing in, in anthers, over the style and single stigma. Single purple line running from throat out into the middle of each lobe. Throat turning brownish after anthesis.

Santa Clara Co

Mt. Hamilton 4200 ft.

- Leptotaenia dissecta - on Mt. H. No specimen taken. [Was it L. californica? - W.L.J., 1933].
- Vitis californica - 8th. Near the Aquarius Spring is a slide-like area devoid of but bordered by brush. On this steep area are grapevines scattered about over the area in almost regular manner and so simulating a planted vineyard. The runners sprawl over the ground because there is nothing for them to climb over. The spot is the only place of the kind that I ever saw. Grapevines grow along streams or about springs but not in distinct colonies where there are no trees.

May 6-8, 1911.

Wind on Mt. Hamilton. - Wright says the highest velocity recorded was 65 miles an hour but he thinks this record has been exceeded. Gales become very high and the "Chicken Walk", a board walk from the boarding house to the Observatory, is lifted off the ground and turned over at times. All sorts of things are carried away by the wind. The Douglas Oak comes right to summit on west side, but the conifers are limited (except Digger Pine) to the east slope.

[Cont. p. 75.]

Santa Clara Co.

Mt. Hamilton

c. 2600 ft.

No. 4210. Pencedanum suaveolens Nutt. but not like Sac. Valley plants. Lower slopes of Mt. H. in open ground. c. 2600 ft.

No. 4211. Agoseris heterophylla lower slopes.

No. 4212. Sanicula bipinnatifida Dougl. lower slopes.

No. 4213. Floerkea douglasii Baill.

Corolla pure white, is my remembrance. I noted in the field that it looked different from the Olema type of thing. It certainly was not yellow like that, and I believe it was white, but this note not made on the spot. As the petals have dried they are a

May 6-8, 1911.

little greenish-tinted on lower half. Notice that the petals are notched at apex. The common strongly yellow form is not so deeply notched, I think, but look up. This colored great fields pure white in Hall's Valley.

No. 4214. Microseris
Mt. Hamilton

No. 4215. =Microseris Gilia gracilis Hook.
Summit Mt. Hamilton. Corolla bright red; faded purple or black in drying.

No. 4216. Layia gaillardioides (H. & A.) DC
Summit Mt. H. Handsome. Very Madia-like. Rays 8, 8, 9, 10, 10, 13.

Santa Clara Co.

Mt. Hamilton

3800 - 4200 ft.

No. 4217. Ribes sanguineum Pursh. At the Joaquin Spring, summit Mt. H. Very handsome.

No. 4218. Astragalus nigrescens Nutt. Mt. H., a short way below summit, west slope. = A. gambelli-anus Sheld.

No. 4219. Gilia tricolor. The three colors far more strongly marked in drying than in fresh specimen. The colors in throat were really very weak. Mt. Hamilton, lower slopes. c. 2600 ft.

No. 4220. Viola ~~purpurea~~ quercetorum S & Cl. Mt. H., towards Joaquin Spring open slopes.

May 6-8, 1911.

No. 4221 Lupinus albifrons Bth. var.? (Collinus Greene *) Foliage in depressed tufts. Keel ciliate above. Banner with central whitish spot, yellowish tint below, or rather aging fading to purple. Corolla blue.

* Det. C. P. Smith.

No. 4222. Viola ~~purpurea~~ quercetorum S & Cl. upper petals brown-purple on back. Lower petal almost 2 times size of the lateral, black-veined at base. - Lateral with a short-hairy gland on one side near base. West slope Mt. Hamilton near summit. More woody-pub. than no. 4220. but because of being in dry exposed place perhaps.

No. 4223. ~~Viola gypsophil-~~ Claytonia spathulata Dougl. s.l. ~~Gidea Howell.~~ Mt. H. very showy on summit.

Mt. Hamilton Santa Clara Co. 4200 ft.

– Amelanchier, abundant at Smith Ck. 2150 ft.

– No. 4224. Ceanothus cuneatus Nutt.
Mt. Hamilton summit.
Probably same as no. 4204 supra. Same station.

– No. 4225. = T. dichotomum
Trifolium dichotomum H.&A.
Mt. Hamilton. = var. turbinatum Jepson.

No. 4226. Grass. Bromus rubens.
Mt. H. Gregarious, often forming definite patches. C. 2600 ft.

No. 4227. Grass. Bromus diandrus Roth.
Mt. H.
Bromus villosus var. gussonei
C. 2600 ft

No. 4228. Microseris
Mt. H. C. 2600 ft

May 6 – 8, 1911.

No. 4229. Thermopsis macrophylla H.+A. a
Flowers sulphur-yellow. Keel petals as broad as wings. Stamens distinct. Pistil stipitate; ovary thinly pubescent. Upper calyx-lip notched; lower lip 3-lobed shallowly. Always gregarious in patches, summit Mt. H. down to Smith Ck.

No. 4230. Linanthus grandiflorus Greene.
~~Leptosiphon densiflorus Brd.~~
flowers pure white; gregarious in more or less extensive patches. Sometimes the patches are very sharply defined and form most beautiful white spots on these grassy oak-scattered hills. Entrancingly beautiful because so delicate. The flowers fade lilac in drying but I

Mt. Hamilton

c. 2600 ft.

saw none save pure white. The small plants 3 in. h. are as numerous as the taller ones.

No. 4231. Grass.
Mt. H.

No. 4232.
Summit Mt. H. 4200 ft.

– Orthocarpus erianthus – in flower.

– At the Joaquin Spring is an old time camping spot. A child's swing was put in there long ago, – the 20 ft. long cables being of Vitis californica!

Santa Clara Co.

May 6–8, 1911.

Bromus madritensis L.
No. 4233. Grass (det. Beecher Crampton Sept. 1912)
Mt. H.
~~Bromus rubens L.~~

No. 4234. Grass. = B. mollis
Bromus hordeaceus
Mt. H.
A common grass on the hills.

No. 4235. Ranunculus californicus Benth. Mt. H.

Color in the Range

– Baeria, millions on millions of plants 3 to 6 or 8 in. high made the color and dominant on account of being gregarious. Hall's valley as seen from the summit of the mt. was white with flowers. Hills and fields on the west side of the Santa Clara Valley were seen from here colored with flowers – 16 miles away!! Easily we could see poppy fields in the valley near San Jose which is 13 miles in an air-line!!

Mt. Hamilton

– Manzanita scrub – through the fine thicket of it, the Wrights cut a trail to the Aquarius Spring. Wright speaks of the toughness of the wood, of the resilience of the sapling-like trunks under the axe, and the general difficulty of cutting the wood and clearing the way. When struck by the axe the stem bounded like so much rubber.

– Distance at which One May See an Individual Tree.

Spires of the Redwood stand out of the Santa Cruz Range 26 to 30 miles away. Wright says that he thinks he has seen Redwood on the Bolinas Ridge on clear days, which would be 55 – 60 miles away.

May 6-8, 1911.

Wind on Mt. Hamilton.

[Cont. from p. 65.]

Under the protection of the east slopes, Yellow Pine, Coulter Pine, Black Oak attain considerable size. But when a Yellow Pine sticks its head above the crest of the ridge in the way of a windcurrent then one sees the crown deflected or curved, or more commonly the axis bare of branches on windward side. Wright says the wind is so strong that Libocedrus seedlings won't stand under it; are flapped all to pieces and destroyed.

Berkeley.

- Abies magnifica on Grayback near Virginia City, Miss Louise McDermott. See spms.
  Look up & verify citation Lemmon's vars.
- Quercus breweri. Look up size of leaves & cf. Silva descrip.
- Klote-dite. Ground from Madia or Hemizonia (probably ray) - achenes. N.W. Mendocino Indians. = a meal for food. - Goddard & Jepson, July 27, 1902.

Berkeley, May 19, 1911.

Color in Coast Ranges.

- Fine year for color. In the Schuelville lowlands south of Sonoma Valley the fields stretched wide with color, mainly yellow but also pink. One color in a place! Harper who was with me remarked that one never sees stretches of color "in the East". There is no such dominance of one species. There is one flower here and another there. The trip to Sonoma Valley, supra, p. 55, was with Harper, Prof. R.A. He was highly impressed.

Mrs. Gray of Sonoma has just been talking

Berkeley

to me about the same things Eastern people have told her they never saw any such stretches of one color before.

– Deodars – ave. at Alfadena, one mile long. Finest kind of a thrill it gives you. The name is Santa Rosa Ave –
Mrs. Metcalf, Yosemite, June '11

Vacaville, May 22, '11

No. 4236. Agoseris grandiflora. Has very short rays. Robust distinctive sort of thing.

No. 4237. Brodiaea ~~grandiflora~~ elegans Hoover. Cf. outer p. 83.
Perianth purple, 1½ in. long; segments acutish, mucronulate, narrower than the inner which are broad but more tapering than the outer. Inner segments obtusish at tip. Perianth (as a whole) funnelform, the lobes only slightly spreading. Green midrib on outside running from tip of segments to base. Tube not inflated. Anthers 4½ lines long, sagittate at base, deeply emarginate at apex, almost or quite ½ longer than the acute (or sometimes with a notch each side the acute point), Ovary with strong wing-like shoulders on top each cell. All the flower parts (and narrowly) staminodia larger than in no. 4238. Corona open. Tube whitish. Umbels 2 to 5-fld. Fils. anthers in string relief on tube.

alt. 175 ft.

Vacaville, May 24, 1911.

No. 4238. Brodiaea minor CB-1-83.
Perianth a little paler than in preceding (blue), the segments rotate, giving a different appearance to flower. Anthers 2 1/2 lines long, otherwise as in preced. Staminodia obtuse, notched, with a mucro in notch, of same length as anthers! or so slightly exceeding them as to be negligible. Green midrib as in preced, but tube greenish and midrib not so marked as in preced. Umbels many 1 to 2-fld. Ovary with smaller shoulders than in preceding, much smaller! or I should say distinctly smaller which expresses it better. [= B. synandra Jepson]

No. 4239. Grass. {Polypogon monspeliensis (L.) Desf.
In low places.

No. 4240. Grass.
Briza minor L.

No. 4241. Grass, perennial.
Poa scabrella. Bth. dry hills.

No. 4242. Grass. Bromus diandrus Roth.
A common grass.
Bromus villosus gussonei

Berkeley, May. 1911.

Two Brodiaea Forms.
Nos. 4237 and 4238.

These two forms are remarkably alike and remarkably different. They are so much alike that one needs only to indicate the differences. The two might well be called major and minor forms, corresponding to some of Purdy's majors and minors amongst the Lilies. The points of difference here indicated are not considered constant differences necessarily but such differences as appear in the abundant material now before me.

– over –

Berkeley

Brodiaea grandiflora (No. 4237)

- Perianth purple, 1½ in. long.
- Ovary with shrug shoulders.
- Anthers 4½ lines long.
- Tube whitish. (a weak dif.)
- Perianth-segments ½ erect-spreading.
- Staminodia oblong-lanceolate or oblong-acute, mostly acutish, plane, much exceeding anthers.
- Tall plants, 10 to 18 in. high.
- Corms deep-seated in gravelly hill, hard, cement-like.
- Buds somewhat angular at mouth of tube
- Tube narrow-turbinate
- Midrib outside prominent and greenish, tip to base of tube, both in flower and bud, esp. conspicuous on buds.

Cont. p. 84.

May 26, 1911.

Brodiaea minor (No. 4238)

cf. also 3:99 F.B.

- Perianth blue, 10-11 lines long.
- Ovary with weak shoulders.
- Anthers 2½ lines long.
- Tube greenish.
- Perianth-segments rotatish.
- Staminodia oblong, retuse, mucronulate, with somewhat involute edges, of same length as anthers.
- Low plants, 7 to 10 in. high.
- Corms shallow, in clay-sandy flat.
- Buds ~~not~~ angular, more nearly cylindric.
- Tube oblongish.
- Midrib outside greenish on segments but less obvious on tube both in flower and bud.

Cont. p. 85.

Berkeley

All this page = 4237. Cont. from p. 82 (no. 4237)

- Scape stout, rigidly erect and therefore straight.
- Corms 8 lines broad.
- Staminodia erect, the anthers approximate about style, the throat therefore open.
- The matter of the fruit is one which will doubtless yield differences, but I have collected no fruit of B. minor to my recollection. The points of difference between the two species are strongly emphasized here, but the resemblances are just as if not more interesting. Taxonomists emphasize dif-

Cont. p. 86.

May 26, 1911.

All this page = no. 4238.

Cont. from p. 83. (no. 4238)

- Scape slender, often much curving, never (?) quite straight.
- Corms 6 lines broad.
- Staminodia closing about the approximate anthers, the throat therefore closed. This fact was noted in a fresh flower of the lot brought to Berkeley. In the field I noted that the B. grandiflora flowers had the throat open. These flowers were on the hillside; so I went back to the flat to look at the B. minor flowers with reference to this point. The staminodia were erect, not closing about the erect anthers. But I did not set this fact down in

Cont. p. 87

Berkeley

cont. from p. 84

ferences, as if resemblances were nothing, whereas resemblances give the clue to relationships, which is the important thing.

No. 4243. Brodiaea.

In order to study the above (p. 87 *supra) problem I went back to exact spot at Vacaville. Brodiaea grandiflora was in fuller flower, June 6, than at the time of my previous visit, May 26., but B. minor had passed out. No. 4243 was gathered from the exact spot

May 26, 1911.

Cont. from p. 85.

the field and there is a chance for mistake possibly. In any event this feature must be studied further. It involves a difference in the two species which was carefully noted in the Fl. W. Mid. Cal. 1st ed.

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in the little flat where B. minor (no. 4238) was in flower, but I am not certain 4243 is from same sheet of plants as 4238. What appeared to be B. grandiflora (no. 4237) is now flowering in the same spot. — Vacaville, June 6, 1911. Notice that sterile fls. become abruptly reflexed on tip of pedicel and fall away!

No. 4244. Juncus ~~oxymeris Engelm~~ det. W. L. J.

Vacaville, June 6, 1911.

J. phaeocephalus var. paniculatus Engelm. det. F. V. C.

Vacaville, June 6, 1911

No. 4245. Calochortus luteus Dougl. =C. superbus Purdy
The flowers were gathered May 26 in same spot. Flowers honey sweet, the flowering period not lasting very long. = Var. citrinus Wats.

No. 4246. Gilia tagetina (Greene). = Navarretia tagetina Greene.

Creek Bottom of the Alamo.

In summer the hot dusty treeless plain was little comfort to a boy but down in the creek grew trees and ran water. It was a different world and the other world was shut out. The winding creek, tall trees, and the flutter of birds, gave it too, a sense of greater extent than it had. So for us boys it was a place of delight with illimitable resources.

Vacaville, June 6, 1911.

Trees and the Land.

- How completely trees may be an index to the soil witness the two sides of the hills above the town of Vacaville, one the Vaca Valley level with its primitive growth of oaks, the other the low rolling gravelly clay plain stretching towards Browns Valley, desolately dry and arid, not a native tree on it, not even willows along the gulches. And what a picture is presented in the dry season by the little settlers places, tenderfeet who came in innocently and hopefully and put up a little Redwood shack and tried to grow trees!

Vacaville, May 22, '11

No. 4247. Grass. Sitanion jubatum. Along railway track ½ mi. north of Vacaville. I do not recall having seen this grass in this district previously.

~~Sitanion polyanthrix acc. A.S.H.~~ May 22,

No. 4248. Grass

Phalaris minor Retz.

No. 4249 Grass

Common grass on the grassy hills. Bromus hordeaceus L. = B. mollis L.

No. 4250. Grass Hordeum geniculatum All.

Gregarious in drowned spots. Hordeum gussoneanum

– Dudley, Wm Russell, died June 14, 1911.

El Portal

– A young woman on the front seat of the stage from El Portal to Yosemite fell to talking about the way and the trees. Said she suddenly: You must be Mr. Jepson! It was Edith Livermore. I told her that I had been asked by some one about my preference for various parts of the mountains and valleys and I had replied, to the great suprise of my questioner that I liked best the chaparral country. Where there is nothing but chaparral on wide reaches. Miss Livermore then launched into a rhapsody about the chaparral in the Middleton country where they have a ranch and described it as haunting. Haunting is a good enough word. It has a certain haunting beauty. The chaparral is wonderful for its colorations and its smooth contours. Its loneliness is one of its subtle attractions. It looks all the same and yet there is variety when you look around, – but not too much. There is simplicity as well as variety. There are all sorts of suprises, because one can lose sight of the far-spreading ridges in unexpected canons and gullies where one finds springs and trees. Trails in the chaparral have a great charm that people rarely suspect.

Yosemite
(Valley floor)

- Yesterday I arrived in Yosemite coming in by stage from El Capitan. On the way up the Valley everything seemed as new and wonderful as if I had not visited the valley three times before. Falls, cliffs, domes, pinnacles and peaks have about them a magic which makes delight and appreciation grow on one afresh with each succeeding trip into this truly remarkable and unique storehouse of natures wonders. There is nothing combed or brushed as in the Alps or English Lake District. Everything is

June 22, 1911.

here just as the good Lord left it lying around. He was trying to do his best here when he was suddenly stopped by the unions enforcing the 8-hour law and Saturday afternoon off. But being a mighty good workman things look mighty good even if the chips are lying around heterogeneous. It shows to those who can read the Geology of it what He was up to.

Yosemite
(Valley floor)

– Prof. H.M. Hall and his wife are here working on their Flora of Yosemite. Prof. I.R. Abrams is at Camp Curry. E. R. Drew of Stanford is at Camp Curry. A Mrs. Metcalfe, a friend of the Robinsons of Columbia and Harvard, is at Camp Curry. She is developing an amateur interest in the trees. Is a relative of John Torrey, her father and mother being Torreys.

The Valley is very full of water; I have never before seen so many falls.

June 22, 1911.

– The LeConte Lodge is a very popular institution in the valley. Visitors at first do not comprehend what it means but after a little they realize that it is a natural history and mountaineering center and make free use of it. It has been crowded most of the time during my stay in the valley.

Yosemite
(Valley flora)

No. 4251. Calochortus Nuttallii T.&G.
Inner C. leichtlinii Hook, not
Periauth segments pure white, a small purplish brown spot above the gland which is at base of segment. Gland horse-shoe shaped, surrounded by yellow hairs which are brown-spotted at base or rather arise out of a brown dot and which become denser at the margin of the gland and are turned over it. Gland itself covered with dense short hairs of equal length giving the appearance of felt (or suggesting felt). Outer periauth segments with a spot of same color as on

June 23, 1911

inner segments. Seams detaching from stem with remarkable facility. Not equalled in this respect by any other species within my experience. Granite sand loam flats, Yosemite Valley.

No. 4252. Collinsia torreyi Gray.
Upper lip whitish, lower lip indigo-blue, as seen from above, the flower otherwise bluish. Upper lip with two short somewhat horn-like processes, the processes slightly turned toward each other. Anthers red. Stems glandular-short-pubescent. Styles (long) recurved

Yosemite
(Valley floor.)

after corolla has fallen. Flowers of about same length as pedicels. Gland subulate.

No. 4253. Potentilla glandulosa Lindl. Petals yellow.
var. reflexa Jepson.

No. 4254. Henizonella
Rays 4, 2-lobed

– Pseudotsuga taxifolia, a tall tree back of LeConte Lodge.

No. 4255. Mimulus. Minetvanthe pilosa (Benth.) Greene. Det. A.L.G.

June 23, 1911.

No. 4256. Fragaria platypetala Rydb.
Berries strawberry red, 3 to 9 lines long. The largest are very sizeable berries. They were served as dessert at the camp of Miss Anita Gomperts where I was invited to dinner and were excellent, being of better flavor than the cultivated kinds. The berries are borne rather abundantly in places. My specimens are with full-grown but not ripe berries.

No. 4257. Potentilla lactea Greene
Petals white (pale-cream-white) orbicular, entire, 3 lines long. Stamens 24, 26. Anthers yellow. ↑full

– Pseudotsuga taxifolia is everywhere from Cascades to Tenaya Falls.

Yosemite
(Valley floor)

No. 4258. Pentstemon laetus Gray. Anthers ciliate, folds on throat whitish. Corolla-tube exteriorly glandular-pubescent with short spreading hairs. I see, casually, no difference between this and the Coast Range form.

No. 4258a. Plagiobothrys Torreyi (Gray) Gray

No. 4259. Calyptridium umbellatum Spraguea
Granite sand. Stamens 3; petals elliptic, but appearing narrower because semi-involute towards base. Petals kink

Mariposa Co.

June 24, 1911.

No. 4260. Silene lemmoni Wats. Petals divided into 4 narrowly linear subulate appendages with 2 stout or linear crests at base. Petals dull white (really very pale yellow white), the crests white. Petal segments coiling on first morning; the flowers open only [one day? See p. 143.]

No. 4261. Ranunculus hystriculus Gray
Cleft of rocks in spray at Yosemite Falls. Petals minute, yellow. Sepals white.

No. 4262. ~~Lophanthus~~ Agastache urticifolius Bth.
upper lip corolla erect with 2 short ovate acute somewhat divergent lobes. Lateral lobes short acute. Middle lobe lower lip transversely flabellately expanded. Corolla and somewhat dull white (really very

Yosemite (valley floor)

pale yellow white). Lower pair stamens longer, all the fils. glabrous. calyx with equal subulate teeth which are pink (!), the tube green. Stamens much exserted. Style included.

No. 4263. Erigeron breweri Gray
Rays 18, 19, 20, 21, 21, 21.
Lavender! disk yellow.

✓ No. 4264. Potentilla gracilis Dougl.
Stamens 20, 20, 20, 21. (var. hallii ~~Vatke~~)
wet mdw.

Account of stamens:=
No. 4264 a is the var. hallii Wolf or P. dascia form. ssp. Nuttallii (Lehm.) Keck

Mariposa Co.

June 24, 1911.

Carex feta Bailey Det. K.K.M.

✓ No. 4265. Sedge
wet mdw. See 4265 a at bottom.

✓ No. 4266. Grass Poa pratensis
wet mdw.

No. 4267. Potentilla glandulosa Lindl. var. reflexa Jepson
Yosemite Falls. Petals yellow, broadly elliptic, shortly acute. Damp rocky slope under cliff.
Stamens 22, 24. Pubescent + somewhat glandular

¶ No. 4268. Nemophila heterophylla F. & M.

June 25. Mariposa Co. Yosemite Falls.

✓ No. 4269. Cryptanthe flaccida Greene.
Corolla very small, white.
Yos. Falls.

[No. 4265 a. Carex feta Bailey. Carex amplectens Mackenzie Det. K.K.M.
cf. Mackenzie's list of dets., July 1915.

Yosemite Falls, Yosemite Valley, June 25, 1911.

alt. 5000 ft.

No. 4270. Pentstemon breviflorus Lindl.
Upper lip galeate-curving, the anthers covered by its arch. Oblong lobes lower lip spreading and somewhat divergent, with pink mid-vein, and 2 short veins in throat between each lateral lobe and middle lobe. Fils. all glabrous. Style glabrous. Sterile fil. very short. Style cleft 1/3 way down. Plant remarkably glabrous!! but the buds glandular-pilose.
Hf. Dry rocky slopes.

No. 4271. Arabis sparsiflora Nutt. var. arcuata Gray.
Petals rich dark red (magenta?). Fils. as a whole reddish. Stems erect from a much branched persistent woody base.

Mariposa Co.

No. 4272. Mimulus moschatus Dougl.
approaching var. longiflorus. Det: A.L.G.
Corolla yellow with brown dots in throat on lower side. 5 Lobes equal, transversely broadly oblong. Calyx-teeth equal. Ridges on lower side throat strong and running well down. Moist mossy rock. Palate not at all prominent. Corolla nearly regular.

No. 4273 Mimulus breweri (Greene) Coville. Det: A.L.G.
Corolla pink, 5 lobes subequal. Border small, only border or limb exserted. Purple dot on base each of 3 lower lobes, the palate yellow and few-dotted. With preced.

No. 4274. Mimulus laciniatus Gray.

No. 4274a. Mimulus nasutus Greene. Det: A.L.G.
Separated from 4274a
Corolla yellow, strongly 2-lipped, the 2 lobes of upper lip turned

Yosemite Falls, Yosemite Valley, June 25, 1911.
Alt. 5000 ft.

backwards towards each other, sometimes so as to be nearly conduplicate, or not at all turned backward. Lower lip with one conspicuous brown dot (sharply defined) on middle lobe. Palate very conspicuous, brown dotted a little. Lateral lobes lower lip spreading laterally. Middle lobe the largest of all the lobes, truncatish. The yellow of this is a little deeper than in 4272 but is impossible to define.

✓No. 4275. Draperia systyla Torr. Style 2-cleft, soft-hairy below, Corolla pale lavender with a flare of darker lavender but fine lines in throat and to edge of lobes.

Mariposa Co.

Stamens unequal.

✓No. 4276. Phacelia imbricata Greene. = P. calycosa (Gray).
I do not see any difference betw. this and the ordinary Coast Range form, such as my no. 4185, Sonoma Valley.

✓No. 4277. Cryptantha affinis (Gray) Greene.

No. 4277a. Nemophila

✓No. ✓4278. Grass, valley floor. Poa scabrella

✓No. ✓4279. " " " gregarious in wettish flats.

Deschampsia danthonioides

✓No. 4280. Grass. Valley floor

Stipa californica

✓No. ✓4281. " "

Bromus tectorum nudus

✓No. ✓4282. Brodiaea ixioides Wats. = Triteleia
Grassy damp land.

Nos. 4283–4285. Nos. not used.

Yosemite to Mariposa Grove, June 27, 1911.

– Left Yosemite at 8 oo oclock. The party = Mrs. Huber, Miss Nora Thomas, Mr. Ray Bailey, myself — and Jack the Pack-mule hired from Kauffman, the Kennyville man, at $2 oo per day. Camped first night in a beautiful pine wood one mile this side of Eleven Mile. Next night we were shown by the soldiers a fine camp with wood, water and a meadow half-way between the two groves at the Mariposa Big Trees. I had obtained a permit from the Superintendent Major Forsythe, a permit to camp and to make a botanical reconnaissance.

– Mariposa Grove, 365 trees in upper grove, 180 trees in lower grove. Mariposa Tree, 293 ft. 6 in. high 22 ft. 8 in. diam. at 8 ft. acc. to a "Map of the Mariposa Big Tree Grant, containing the Big Tree Grove surveyed under instructions from the Board of Yosemite Valley and Big Tree Grove Commissioners by I. N. Chapman, C. E. September, 1890."

[This map consulted at Supt's Office.]

One hundred trees have their diameters given in a table at base of map, occassionally the name of the tree is given and the height. The diameters are at 6 ft. above ground. The corresponding numbers are given on map.

Grouse Creek (5000 ft.)
(Yosemite to Wawona)

No. 4286. Circaea alpina L. var. pacifica (Asch. & Mag.) Jones
Petals obcordate, the 2 stamens alternate and spreading. This would be an interesting and peculiar flower to people if it were large.
– Heracleum lanatum Michx. Cascades, Pohono Bridge
– Corylus rostrata, Grouse Ck.

No. 4287. Cypripedium montanum Dougl.
Upper flower segments broadly lanceolate, lateral segments linear lanceolate, twisted, all brown and spreading. Sac white pink-veined inside. Column curved by a broadly elliptic yellow fleshy structure which is longitudinally trough-shaped.

June 27, 1911.

Stamens lateral to the stigma column, the anthers on the under side of fleshy fils. Lower segments notched at apex, really consisting of two segments.
– Chamaebatia foliolosa, is now beautiful on the forest floor on account of its show of white flowers. Mr. Ray Bailey calls it "Bear Weed."
– Calochortus venustus in fl on the Yosemite – Wawona Road at lower altitudes, the red-fl. Calochortus _____ at higher altitudes.
– Adenocaulon bicolor, carpets the forests in spots and is more or less everywhere.
– Ceanothus integerrimus is very beautiful in fresh full flower – as under its snowy masses

Eight-mile (6000 ft.)
(Yosemite to Wawona)

Mariposa Co.

make it called "Snow Brush" (See p. 129)

No. 4288. Ceanothus parvifolius Trel.
Fine masses of it but not common as C. integerrimus which is an erect shrub. This shrub has merely ascending branches, making a low spreading shrub. Grouse Ck.

No. 4288A at Wawona Pt.

No. 4289. Corollorohriza C. striata Lindl.
Common in pine woods at & about Mariposa Big Trees also.
C. bigelovii Wats.

No. 4290. Lathyrus nevadensis Wats.
Common in open pine forest

No. 4291 Vicia californica Greene.
Fls. purple. Leaflets truncate Common through the ~~[illegible]~~ Yellow Pine woods from Yos. to Wawona.

No. 4292. ~~L. campestris DC.~~ Luzula comosa Juncoides
campestre Ktze. group. Det. F.V.C.

No. 4293. Sedge. Carex multicaulis Bailey
Widely distributed in dry open pine woods.

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No. 4294. Calochortus venustus, var.
Red-brown half-moon eye spot in centre per. segments which are red. Gland squarish, densely hairy. Flare of white & brown pencils & dots above gland, a rainbow of it running across eye. in best develop. form Lanceolate eye spot on sepals. Grouse Ck., at higher alt. than C. venustus which is at Wawona.

No. 4295. Grass. Bromus ~~vulgaris~~ orcutrianus Vasey

No. 4296. Eriophyllum

No. 4297. Sedge. Carex feta Bailey Det. K.K.M.

No. 4298. Sedge. Carex Bolanderi Olney.

Mariposa Co.

Mariposa Grove

No. 4299. Lupinus stiversi Kell.
Red banner; beautiful species
wings; yellow. Wawona
Keel glabrous. Banner turning
dull red-brown.

No. 4300. Mimulus Torreyi Gray. Det. A.L.G.
Throat and limb very pale or
pink white. Outside or upper
side = red. Ridges in throat
yellow. Millions of them.

No. 4301. Pleuricospora fimbriolata Gray.
Wawona. Petals, sepals 4.
Stamens 8 in 2 sets, the
sets more approximate on
one side than on other.
This white. Ovary placentae
5, 5, 6, 6, 6, 6, 7, 7, 7. In

June 29, 1911.

forest mould.

No. 4302 Grass. Poa scabrella
On white granite. Lower Grove

No. 4303. Grass
Melica aristata Thurb. Lower Grove

No. 4304. Grass
Poa scabrella Benth.

No. 4305. Actaea rubra var. arguta
Petals 5. Stamens about 35-40
Petals long-clawed.
6700 ft. alt.
Near "The Cabin".

No. 4306 Corallorhiza maculata Raf.
Lip white, pink-dotted; 3 lobed,
the lateral lobes small and
running down into a flare or
upturned edge of the lip. The
five lobes brownish, oblong,
similar, spreading on upper side
flower. Short spur on lower side

Mariposa Grove

Named Trees – Upper Grove

1. Oregon
2. Kentucky
3. Massachusetts
4. Diamond Group (4)
5. Mariposa
6. Washburn
7. San Francisco
8. San Diego
9. Sunset
10. Iowa
11. University of Michigan
12. West Virginia
13. Oberlin
14. Governor
15. Commissioners (8 trees)
16. Missouri
17. Arkansas
18. St. Louis

June 29, 1911.

19. Philadelphia
20. Ohio
21. Haverford
22. Lafayette
23. The Old Guard (4 trees) a very fine group in a row
24. Columbia
25. Gen. Sherman
26. Gen. Grant
27. Gen. Sheridan
28. Fresno
29. Colorado
30. Rhode Island
31. Francis Scott Key
32. Utah
33. Montana
34. Indiana
35. New Hampshire
36. Delaware
37. Florida

Mariposa Grove

38. Maryland
39. North Carolina
40. North Dakota
41. South Dakota
42. Maine
43. Washington
44. William McKinley
45. Minnesota
46. Connecticut.
47 Indianapolis (This stands close alongside no. 34.)
48 Forest Queen
49. Boston
50 Nebraska
51. Wah-wona. (Stage-coach tree)
52 Nevada
53 Pasadena
54 Governor Tod
55 General Logan
56 Lincoln

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57. Los Angeles
58. John Hay
59. John Muir
60. West Point
61. University of Pennsylvania
62. Denny
63. Grover Cleveland
64. Chester A. Arthur
65. James A. Garfield
66. Harvard
67 Louisiana
68. Galen Clark
69. Pittsburg
70 New York
71. Vermont
72 Virginia
73 Honolulu
74 Chicago
75 Hamilton

Mariposa Grove

76. Wyoming
77. Idaho
78. Washington State
79. Capt. A. E. Wood
80. University of California
81. Longfellow
82. Whittier
83. Mark Twain
84. Yale
85. Gen. Robert E. Lee
86. Stonewall Jackson
87. Georgia
88. Mississippi
89. South Carolina
90. Wade Hampton
91. Telescope
92. Illinois
93. Kansas.
94. Wisconsin

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95. Tennessee
96. Oklahoma
97. Samoset - named by Ralph
98. Waldo Emerson.

[Only adult trees were counted i.e. those having fluted bark and with lower limbs self-pruned to 15 or 20 ft.]

Summary Upper Grove.

Unnamed trees =	254
Named trees =	114
Total Upper Grove =	364

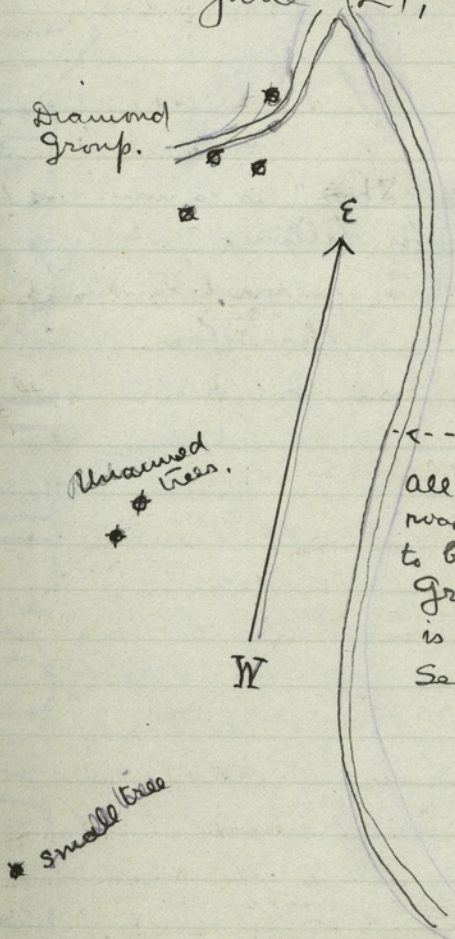
Mariposa Grove

- Trees = Sugar & Yellow Pine, Incense Cedar, Black Oak,
- "Woodland Star" is a name used by Mrs. Huber for Tellima.
- Ceanothus divergifolius, makes a fine soft carpet.
- Ceanothus parvifolius Trel
- Castanopsis sempervirens, thicker of it.
- Ceanothus cordulatus Kell. thickets high in centre, branches at tips going to ground. Low mounds, high in centre. C. parvifolius with somewhat ascending branches

"Grizzly Giant.

"Circumference 104 ft. Height 224 ft. Large limb 100 ft. above ground 6 ft. in diameter. Containing about 1,000,000 ft. of lumber. Estimated to be about 6,000 years old. The largest and oldest tree in the world." = Signboard on Tree.

June 29, 1911



Mariposa Grove

— Grizzly Giant. circ. at 4 ft. = 84 ft. 4 in. taking in all snags.

- Baxter, the Keeper at the Cabin, says: Now, we don't think much of John Muir up here. We know him too well! Years ago he and Hutchings had a sawmill in Yosemite Valley and cut off all the fine timber. Now he doesn't want anybody to touch a twig. Then he ran off to San Francisco with Hutchings wife. Deserted her there and left her without money. If he had stayed by her we should have had more respect for him. No, we don't go a

June 30, 1911.

cent on Muir. Now, Galen Clark is a fine man. We like him. He was a splendid character and fine gentleman."

Upper and Lower Grove.

I do not find any definite boundary established between the two groves. The most natural division — where there is the greatest gap, since the Mariposa Grove is in one sense a continuous grove — is between the Diamond Group on the upper hand and the Michigan New Jersey, Pennsylvania and Faithful Couple on the other hand. All above the Diamond Group are on a rather sharply defined plateau with the sides falling off from a crest or ridge around the edge of it. My division is ∴ distributional & topographical.

- Snow. Was told by Baxter at Mariposa grove Cabin that snow was 25 ft. deep in winter.

Mariposa Grove

Lower Grove

1. Alabama (Said to have the most perfect top of any tree in the grove)
2. Grizzly Giant
3. Three Graces
4. California
5. Texas
6. Sacramento
7. Princeton
8. Faithful Couple
9. Pennsylvania
10. New Jersey
11. Michigan

Total = 13

Named trees = 13
Unnamed trees = 113
Total in Lower Grove = 126

Counting Faithful Couple as 1.

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"The Sentinels" were 4 trees at entrance Lower Grove, not marked, and a fifth tree called "Sergeant of the Gaurd" not marked.

Bachelor, an unmarked tree opposite the Three Graces.

Corridor = tree near the Sacramento.

Group of ten Trees in flat = Cathedral.

There are 17 trees in middle group, that is upper portion of lower grove, Alabama being at lower end of this group.

Grand Totals

Upper Grove 364
Lower Grove 126
Mariposa Grove - - 490.

Mariposa Co.

Mariposa Grove

No. 4307. Habenaria Unalaschensis Wats.
Lower sepals long, spreading downward. Upper sepal erect.
Wawona, 4100 ft.

No. 4308. Agoseris retrorsa
Wawona

No. 4309. Nemacaulis ramosissimus var. montanus.
Upper lip of 3 lobes* with a yellow glandular spot at base and a double half-moon of magenta just above yellow spot. 3 lobes diverging. Two lobes below approximate, hanging straight down. Stamen column separating at base into fils., the two upper each with a grill of 5 deflexed hairs. Flowers white.

* Must have been lower lip

June 30, 1911.

Snow Brush. The statement at top p. 112 is a mistake. Ceanothus integerrimus is never called Snow Brush. Its great masses of flowers make beautiful pure white clusters but its pale green leaves are mixed with the general effect. C. cordulatus is properly called Snow Brush. It is a fine name. The broad low mound of it in swales & on slopes gives the effect of a vanishing or receding snow bank with its extreme profusion of flowers now sweet-heavy with fragrance. Again the name is appropriate since the snow bends the branches down to the ground. Buck

Mariposa Co.

Mariposa Grove to Wawona to
4100 ft.

Brush (C. cuneatus) is common about Wawona; it has 5 to 12 or 15 stems in an erect clump.

Mimulus montioides Gray. Det. W.L.J.

Det. A.L.G.

No. 4310. Mimulus discolor Grant. Dwarfs but probably occurring also in larger form. Plainly bilabiate yellow corolla, the lobes all emarginate the lower more deeply. Palate with 2 prominent ridges, brown-dotted. Calyx-teeth equal. Different from #4272. Herbage gland-pub. Wawona. moist-fine gravel bank

No. 4311. Chamaebatia foliolosa Bear-weed. Mountain misery - better name. Stainens about

Alder Ck. Trail .... July 1, 1911.
4500 ft. Yosemite Park

50 to 60. Wawona.

No. 4312. Cryptantha flaccida (Dougl.) Greene
Corolla white. No crests in throat. Wawona

– Datisca glomerata B. & W.

No. 4313. Grass. Bromus tectorum nudus
Alder Creek. A fine slope of it in the "open" at our camping place. "Jack", the pack mule, fed on it with evident content.

No. 4314. Mimulus bolanderi var. brachydontus Grant. Det. A.L.G.
Corolla crimson, evidently bilabiate; lobes transversely (and broadly) oblong; palate with a Y-shaped white spot very sharply defined. Different in

Alder Creek Trail, 5500 ft.
Yosemite

color markings from any other species I ever saw.

No. 4315. Grass.
Poa scabrella Benth.

No. 4316. Lathyrus sulphureus Brew.
Corolla dull white with pink venation on middle of banner, the whole turning sordid

No. 4317. Peucedanum vaseyi C. & R.

No. 4318. Peucedanum macrocarpum Nutt.

No. 4319. Collinsia
Fls. pale lavender. Lobes all oblong with parallel sides, retuse, the two lower a little longer. nawona.

Mariposa Co.

July 1, 1911.

No. 4320. Grass. Lost on duple [illegible] of some other no.? Trees.

No. 4321. Mimulus inconspicuus var. Grayi Grant. Set. A. L. G.
Corolla pink, only evidently bilabiate; ridges of palate yellow; lobes emarginate. Calyx very plicate; not like no. 4300. The dried specimen does not give a very just idea of corolla size.

No. 4322. Lotus ~~douglasii Greene~~ = L. nevadensis
Procumbent, or ascending. Prostrate, ~~var.~~ nevadensis Ott.

No. 4323. Agoseris grandiflora

Alder Creek Trail (5500ft)

No. 4324. Stellaria jamesii Torr. Styles 3. Stamens 5, 6, 6, 10. Petals white, cleft. Alder Creek.

No. 4325. Vicia californica Greene. Corolla blue-purple, sometimes white, sometimes red. Same as #4291.

No. 4326. Senecio integerrimus var. exaltatus (Nutt.) Crong. Very common and widely dispersed species in the open pine woods. I collected this in a pine wood near Alder Creek. A colony of them in a swale attracted my attention as evening fell,

July 1, 1911.

all the clusters of heads being strongly turned towards the setting sun. One plant in a (or rather declining) place but seen nearly everywhere in yellow pine woods.

No. 4327. Mimulus Layneae (Greene) Jepson. Rel: A.L.G. Doubtless same as No. 4311 obtained lower on trail but while Y not so prominent and bordered above by dark red, small Dark red flare spot [1] in centre each lower lobe and between upper and lower lip at sinus. This latter spot often becoming confluent with or fusing with the flare spot in centre of lateral lobe adjacent to it. This flare spot is marked,

Mariposa Co.

Alder Ck. to Peregoy →
5500 ft. 7200 ft.

not a mere dot. It is shaped something like an inverted exclamation point without the dot. The above is a fair description of a typical corolla but the detailed markings are variable.

= Hordeum fusca Lindl.

No. 4328. Potentilla douglasii Greene. Wedge-shaped white petals truncate, retuse. Stamens 10, the 5 alternate with the petals having broadly dilated filaments. Matting ground in patches.

No. 4329. Lupinus confertus Kell. Just coming into fl.

Mdw. July 2, 1911.

No. 4330. Plagiobothrys torreyi Gray. Note the purple stain on sheet!

No. 4330a. Sedge. Scirpus micro-

No. 4331. carpus Presl. Scirpus eriniger Gray. Wats

No. 4332. Habenaria sparsiflora Upper sepal ovate, erect; the lateral petals deltoid-lanceolate, arching under it from the side with the tips approximate. Lip lanceolate-linear, hanging stiffly straight down. Lateral sepals reflexed spreading, i.e. reflexed but diverging slightly. Spur longer than lip.

Carex fracta Mackenzie, Det. K.K.M.

No. 4333 Sedge. Carex specifica Bailey.

Mariposa Co.

Alder Creek to Peregoy

5500 ft. circa 7200 ft

No. 4334. Mimulus Tilingi Regel var. Corallinus (Greene) Grant. Det: A.L.G.
Corolla almost sulphur-yellow, the lobes truncatish. Palate very prominent, hairy, slightly brown-dotted. Leaves dewy-shiny, very thin.

No. 4335. Sedge
Carex Jonesii Bailey. Det. K.K.M.

No. 4336. Phacelia humilis T.&G.
Corolla pale lavender, glabrous. Stamens 5, glabrous, arising from scales. = P. doziana Jepson & Hoover.

No. 4337. Caltha biflora DC. = C. howellii (Huth) Greene
Peregoy Meadows, making a beautiful show in the meadows.

Mdw. to Glacier Pt. July 2, 1911.

No. 4338. Phlox ~~Longlaciï Hook.~~ diffusa Benth.
Beautiful lavender mats on granite-sand slopes in open.

No. 4339. Hesperochiron pumilus Porter. Fls. white, cor. like a Baby Blue Eye. Filaments, style and corolla hairy at base. Corolla white with a flare of faint-pink vine

No. 4340. Sedge. Carex Raynoldsii Dewey. Det. K.K.M.

No. 4341. Astragalus bolanderi Gray.
Flowers dull white. Banner narrow, spreading backward, slightly deft.; wings standing straight out in line of calyx, revolute from upper edge, slightly divergent. the tip

Peregoy Meadow to

No. 4342. Viola glabella Nutt.
Leaves very thin. All the petals broadest toward apex. Corolla as if bilabiate, the upper petals and the two lateral spreading upwards so as to make a physiologically bilabiate corolla. Two upper petals smaller than the two lateral. Lateral petals and lowest petal purple-veined. Lowest petal largest.

No. 4343. Borago
Corolla strictly salverform, whitish, sky-blue. Crest at mouth of tube (the limb rotate) prominent. Cor.-lobes imbricate in bud. Stamens 5 style included, the former inserted high, and alt. with crests.

Yosemite, July 2, 1911.

No. 4344. Calochortus nudus Mats.
Glacier Pt. Gland transverse, narrow, covered by a subtle toothed or cleft unequally on upper edge. Perianth white.

No. 4345. Frasera speciosa Dougl.
Circles of lowest leaf whorls of a young plant 12-14 inches high. - Glacier Pt.

- Abies magnifica - bark a deep rich red when chipped or blazed.
- Acer glabrum, near Glacier Pt.
- Quercus vaccinifolia, behind Glacier Pt.

- Cerasus emarginata, considerable thickets of it behind Glacier Pt. 2 miles - filling swales and covering slopes northeasterly - now in full flower and very spring-like.

Alder Creek to Yosemite

– Camped last night on Alder Creek at point where Alder Creek trail crosses it. Beautiful camping spot with "open" and sentinel pines 225 ft. high on edge of it; the stream roaring by like a river, the feed knee-high to the mule.
– As I stood studying the Grizzly Giant a wagon from the San Joaquin plains drove up – country people. Two men started to measure the tree with a stick. I offered my tape. As the man returned it he stepped back to look up at the tree with the remark: "Well, it's the ugliest one I ever saw!"

July 2, 1911.

No. 4346. Grass Last or dupl some other no?

No. 4347. Phacelia vallicola Congdon. Yosemite Falls, June 25.

No. 4348. Sedge Carex whitneyi
Yosemite floor. Wet mdw. June 24.
Carex whitneyi Olney. Det. K.K.M.

No. 4349. Grass. =H. brachyantherum Nevski Hordeum nodosum
Near Mariposa Big Trees, June 30.

[No. 4260. Silene Lemmoni.
Corolla opening and segments of petals spreading rotately & stiffly(!) i.e., the petals so spreading, the segments not coiled, in the evening(!) that is about 5 o'clock and segments coiling

Yosemite Valley

from tip next morning? Probably above is correct. See p. 101 above. See p. 154.
See also 23:18.

No. 4350. Montia parvifolia (Moc.) Greene ~~Howell~~
Stamens 5.

Yos. Falls. July 6.

No. 4351. Viola blanda Willd. = V. macloskeyi Lloyd
Cor. white.
Betw. Yosemite Falls and Eagle Peak.

No. 4352. Mertensia (ciliata Don. var.) stomatechoides (Kell.) Jepson
Mertensia sibirica Don.
Cor. sky-blue or Baby Blue-eye Blue. Throat as long as tube, the lobes rounded, short. Short yellow gland-like crests at mouth of tube, the

July 4, 1911

stamens inserted alternate with them and exserted into throat. Filaments spoon-shaped dilated upward, attached to anthers 1/3 way up, the anthers facing inward. Style exserted from corolla; stamens included, not quite as long as tube. Clusters drooping. Leafy. Leaves & stems very fleshy & brittle.
Betw. Yos. Falls & Eagle Pk.

No. ~~4264~~ 4353. Lupinus
Abundant on granite-sand-loam flats. Eagle Peak.

Lost?

July 6.

Eagle Peak 7300 ft
Yosemite Valley

No. 4354. Viola ~~pinetorum Greene~~ purpurea Kell. var. ssp. mesaphyta B. & C. ind. Cor. yellow. Upper petals red, obovate-oblong. Lateral petals similar, spreading laterally. Lower petal flabellately-dilated, only this one ~~one~~ dark-nerved, or the lateral a little. Eagle Peak. Granite-sand flats.

No. 4355. Phacelia humilis T. & G. Pale blue cor. Leaves strongly veined, the mid-rib beneath purple. Granite, summit El Capitan fils. fading deeper v. blue.
= P. dociana Jepson & Hoover

No. 4356. Sedum obtusatum Gray.

Mariposa Co.

July 6, 1911.

Petale brownish yellow. Stamens 10.
Eagle Peak Trail to El Capitan.

No. 4357. Lewisia yosemitiana Jepson
Granite sand on top of El Capitan. The plants just push up through the barely granite sand and the flowers open out right on the surface, just like a rosette pushed up from below and opening on the surface. The flowers are very beautiful and suggest diamonds set in the crown of El Capitan.
See page 153.

n. Mariposa Co.

El Capitan Summit 7600 ft.

No. 4358. Ivesia santolinoides Gray
Potentilla santolinoides Greene.
Summit of El Capitan

No. 4359. Grass Poa scabrella (Thurb.) Benth.
Poa sandbergii
Summit of El Capitan

No. 4360. Allium tribracteatum Torr.
Granite sand, El Capitan.

No. 4361. Brodiaea gracilis
Segments much longer than tube; filaments filiform; anthers blue, versatile. Perianth yellow, the segments with brown streaks outside. Scape purple. Ovary on slender stipe.

No. 4362. Grass
Poa gracillima
Summit El Capitan.
all from one stool.

Summit - El Capitan.

July 6, 1911

- Alpine Phlox in full ff. - on summit
- Streptanthus orbicularis, plentiful. Just coming into ff. Summit
- Pinus Jeffreyi - windswept

No. 4363. Lupinus breweri Gray.
Flowers gentian blue. Lower sepal truncate (or 3-toothed obscurely). Upper sepal deeply cleft. Keel ciliate on upper portion, the banner with a white center and a few dots. This plant forms prostrate mats 1 to 3 feet broad or more on summit of El Capitan. When one attempts to take specimens he finds

N. Mariposa Co.

El Capitan Summit
alt. 7600 ft.

the herbaceous stems running down to woody prostrate stems which are branches of heavy wood trunks lying in the surface of the granite sand.

No. 4363a. Lupinus breweri Gray
Doubtless same as 4363 but keel (recorded in field) glabrous and flowers not so deep a blue. Near El Capitan summit ½ mile towards Eagle Peak on trail.

July 6, 1911.

No. 4364. Eriogonum incanum.
El Capitan summit:
Fls. lemon-yellow.

No. 4365. Eriogonum incanum.
With preced. Fls. saffron-yellow.

No. 4366. Arenaria capillaris Poir = A. Kingii (Wats.) Jones
El Capitan Summit:

No. 4367. Grass Danthonia unispicata
Eagle Peak Trail to El Capitan on bare granite, about half-way between. alt. 7500 ft.

No. 4368. Umbellifer. C. & R.
With preced. Peucedanum torreyi

No. 4369. Grass. With preced.
Stipa occidentalis

Eagle Peak, Yosemite
7500 ft.

No. 4370. ~~Claytonia~~ Lewisia triphylla Rob.
Eagle Peak.
Lewisia triphylla Rob.

No. 4371 Polygonum kellaggii Greene
Eagle Peak.

No. 4372. Viola adunca Sm.
Cor. blue. Lateral petals bearded toward base on upper side. Lower petal white at base, with purple veins. — Eagle Peak Mdws.

No. 4373. Raillardella scaposa Gray. Top of Yos. Falls Trail, above Yos. Falls.

Mariposa Co.

July 6, 1911.

No. 4374. Carex teneraeformis Mackenzie. Juncus nevadensis Wats. Det. F.V.C.
Eagle Peak Mdws. 7200 ft.

No. 4375. Juncus
Eagle Peak Mdws.

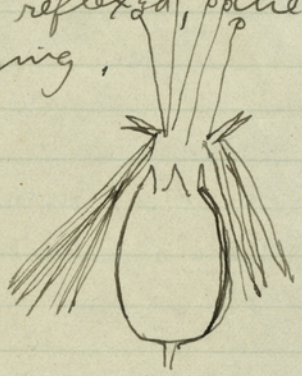
— Lewisia yosemitiana, no. 4357.
cont. Counts of flower parts.

Fl.	Sepals	Petals	Style-br.	St.
No. 1.	6,	11,	—	—
No. 2.	4,	7,	5,	circa 22
No. 3.	5,	9,	5,	22
No. 4.	4,	10,	5,	26
No. 5.	4,	8,	—	—
No. 6.	4,	8,	5,	16
No. 7.	4,	8,	—	19

Where blanks occur counts were not made. See page 147 supra.

Yosemite to Tenaya Falls

– Silene Lemmonii. At 7:45 a.m. Tenaya Trail I find the petals straight and reflexed, & the flowers hanging.



This is a fearfully rude sketch made on trail. But it represents the angle at which the crests stand. The flower drawn erect for convenience. The flowers I have found with un-

July 8, 1911.

coiled petals at 5:30 or thereabouts in the evening. Evidently they open in the evening and remain open until at least 8:30 in the morning, the petals coiling during the morning and remaining coiled all day. I should doubt if petals uncoiled after once coiling – Cf. p. 143.

Mariposa Co.

Tenaya Falls & Snow Ck.

No. 4376. Grass Melica harfordii
Tenaya Ck.

No. 4377. Grass Elymus glaucus
also 4377a = " "
Tenaya Ck
Two sheets; but the same?

No. 4378. Arnica
Tenaya Ck

No. 4379 Zauschneria californica SSP latifolia Greene.
Snow Ck. Trail

No. 4380. Heuchera rubescens var. nevadensis
Calyx pinkish white covered with soft glandular hairs, the tips of the minute lobes or small greenish, the base of calyx-tube greenish. Petals white, oblong, tapering to

Trail, July 8, 1911.

the acute apex and tapering to base. Ovary about 2/3 inferior Styles 2. - Snow Ck Trail on granite slide under arched dome.

No. 4381. Grass Sitanion subulatum J. G. Smith
Snow Ck Trail, on granite

No. 4382. Grass
Snow Ck. Trail, on granite
Muhlenbergia montana ~~gracilis~~

No. 4383. Saxifraga nidifica Greene ~~californica~~ Greene.
wet granite slide
Snow Ck Trail. = S. fallax Greene!

No. 4384. Tr. folium variegatum Nutt. Annual! Corolla white, a purple spot at center keel ~~banner~~ wings. Var. pauciflorum McDer.
with preced.

No. 4385. Juncus
with preced.

. Snow Ck. Trail

July 8.

No. 4386. Brodiaea grandiflora Sm.
Throat open. Staminodia acute, longer than anthers.
Tenaya Ck. = B. coronaria Jepson.

No. 4387 ~~Hieracium~~ Crepis acuminata
Tenaya Ck. 5500 ft.
Later det.: Carex amplectens Mackenzie. Det. K.K.M.

No. 4388. Sedge. Det K. K.M.
Snow Ck Trail. On wet ledge granite. Carex lenticularis var. limnophila W. Boott. Det. K.K.M.

No. 4389. Hulsea heterochroma Gray.

Yosemite. July 9, 1911

Talk on Big Trees before Sierra Club.

There is no living thing which so readily lends itself to exaggeration as the Big Tree. And exaggeration is a peculiarly American vice. Of all Americans Californians are the worst exaggerators But that is because we really have something to exaggerate about. Now it is all within reason that a man who has some imagination can stand before a Big Tree and not be tremendously impressed by it. Nor if he is give to

Yosemite

an adequate impression to a man who has never seen a Big Tree he is naturally going to exaggerate in order to convey an adequate picture. I wish some one could talk to you who had stories of the Big Trees to tell you — for that was what Mr. Allen asked me to do for you this evening — to give you a story of the Big Trees. I feel a good deal like that Sierra Club girl who was discussing her dunnage

July 9. 1911

bag equipment with friends at the commissary dinner the other evening and said: "Oh, no! I wouldn't for the world think of bringing a whisk-broom in my dunnage bag, ~~equipment~~ but I'd like awfully well to borrow one!".

So, I wouldn't for the world think of inventing a lot of lies about the Big Trees but I'd like awfully to borrow some. Mother wants I like to hear the other man tell them. One winter evening I was at Broder's Cabin on the South Fork Kaweah. It was long

Yosemite, July 9

about Christmas and the cowboys had come in from all parts of the range to celebrate. Around the great fireplace the men gathered and told stories of wild animals and drifted off to cattle and one told about driving cattle in eastern Oregon, 2000 head across a river through a hollow Sequoia log, and 200 head getting lost in a hollow limb! No Sequoias in eastern Oregon but what's the use of spoiling a good story with scientific facts.

Big Trees.

Life History. Development of the individual from seedling to old age. Age

1911.

of the trees. Actual age studies. Impossibility of determining age by size in case of a particular individual. The largest trees. See p. 177. Oldest living thing prob.

Race History. Big Trees not oldest racially. Pines older than Big Trees.

– University student on San Joaquin train; a bit of his conversation as heard from seat behind: "Yes, I liked that feller. Say, he was a prince. But Cramer was the doggonedest feller you ever did see. Yes, I liked Miss Sharp. I stood in strong with her. Why she let me graduate from high school I can't pipe you. Jiminy, I think her letting me graduate from High School spoiled her career. But that other one. She just had to show me. No thing like her can't make me go when I don't want 'er?" — — Just a sample of our college culture.

Three Rivers

Water Grass.

— Frank Britton shows me a grass (Echinochloa zelayensis Schuelt.) which grows in the irrigating ditches. Cattle will stick their heads way down into the water to get it for they are very fond of it. It multiplies by a runner which runs down stream becoming a vine 10 or 12 ft. long. The vines also form tubers. Such plants will start in the irrigating ditches; they will collect sediment and form a little bar and soon the ditch is choked. We have to keep rooting it out all the while.

See page 90 of vol. 24.
= no. 4717.

August 10, 1911.

— Billion Dollar Grass, an annual grass which spoke out in a remarkably free manner. It was advertised as a fine grass that if every farmer in the United States would plant [?10 acres] of it it would yield a billion dollars in a year. Mr. Urlich, father-in-law of Knowles Britton, planted it. The Brittons say it is the same as a native grass.

See page 90 of vol. 24, no. ____.

— Cf. annotated copy of Manual, p. 141. Billion Dollar Grass probably the same, Echinochloa frumentacea Link.

Three Rivers

– Mr. Maxson, last settler on the South Fork Kaweah Road, says: "Horses aren't "loco'ed" by eating Loco weed. Its sand on the stomach forming lumps as hard as granite. I've investigated and I know. They get the sand in 2 ways, 1st. by drinking at bubbling springs where the sand constantly boils up; 2d by picking up the hulls of alfalfa seed about ant holes. The ant cleans out his hole in Sept. + Oct. to make room for winter storage. He piles about the mouth of his hole pieces of sand half as big as a rice-grain. He also hulls or shells the alfalfa seed which he gathers and piles the hulls outside with the

August 11, 1911

grains of sand. The horse like the hulls but in eating them, they necessarily get also the grains of sand."

– Blue Oak; Frank Britten says: Often killed by too much irrigating water. Not the case with the Live Oak or Valley Oak (= Valley Oak).

– Trichostemma lanceolatum = of the dry hills = Camphor weed, says Frank Britten. The odor is nearer Camphor or Turpentine than Vinegar, a lot!!

Three Rivers

- Hogs are great things in the forest. They plant so many seeds. (Cf. notes on sheep, vol. 23, p. 165. The hogs derided by Clarence King were doing the real thing.)

- The mountaineers do not feel hospitably toward the Sierra Club after their experience with them. On account of the large number in one party their stock trample out more feed than consumed and the streams are whipped dry. No party of the usual size can follow after them. A meadow will soon

Aug. 11, 1911

recover from the effects of a small party but it takes a long time after so large and destructive a party has passed. Moreover they descend on people who are not prepared to give dinner to so large a party and complain of the lack of dishes, Etc, Etc.

Berkeley

- Laurel Oak = Quercus wislizenii. Napa valley, Jack Lyman.
- Prunus emarginata, Alpine Co. Calif. small trunk, comm. R. R. Rogers, in museum. Shining patches of red bark but mostly silvery on account of thin shreds exfoliating horizontally or rather transversely. Does any other of our species do this?
- Miss M. Grace Rowe, one of my students collected at Vallejo (Nov. 1, 1910, etc) and at Mt. Hermon, Santa Cruz Mts., (July 6, 1910, etc).

1911.

Field Collecting.

The number should be put on the lower right hand corner on the sheet for convenience in the laboratory but that is not the convenient corner in the field. I usually put it on anywhere that is convenient. This last summer there was so much storm, so much collecting that usually I numbered up my plants after getting into camp at night. But this is not the best way. They ought to be numbered in the field, the station and altitude put down at the moment. The alt. is in any event an approximation for a field botanist, but he can come nearer in the field than later on. If sheets could always be numbered in one place failure to put on the number would catch the eye in shifting the sheets. I checked all my 1911 sheets immediately after returning from the field. Two or three sheets had no number at all. I remembered exactly where I had gotten them and was verified by the number and description of the plants in the field book but the best way is to number in the field and check up each night.

Berkeley

— Greene, E. L. Said I in response to an inquiry: "Greene's foible is name-changing, "priority", nomenclature. He is a man of active mind, fertile in good ideas, ingenious in treatment. If all his power, his amplitude, his aggressiveness could have been concentrated on plants themselves, on their structure and life-history, how much more entertaining and useful work he could have done." The above not expressed very well; the statement is capable of much improvement. — Aug. 1911

Aug. 1911.

Pressing Plants.

— The pressing of plants properly is not a difficult but it requires pains. It looks so simple that even people who are desirous of learning the art and who are in the habit of taking pains with other things find that they do not secure good results here. The reason being that they do not realize the pains necessary — it looks so simple.

Three Rivers

- Sequoia gigantea - in the South Kaweah forest, south of the South Fork, must be easily 5000 trees showing adult characteristics. Only a few very large trees.

One tree measured by Blosser = 58 1/2 ft. circ. at 5 ft. The reproduction is very strong, young trees springing up everywhere, the reproduction equalling that of any of the associated species. —

Hockett Mdw, Aug. 15, 1911.

Aug. 1911.

Camp Equipment

- Halter for stock.
- Hobbles " "
- Small deep dishpan
- Salt in a can
- Sugar in a colored bag, etc
- Closed receptacle for grease.

— Steward Edward White in "The Cabin" has good ideas on camp fires equipment.

— Pelostyles thurberi on a Daba near base Superstition Mt. June, 1911 acc. Bridwell. — Aug. 1911

Yosemite Valley

Trees of California. Corrections.

- Western Yew, should be searched for in Monterey County. Write to people along that coast including Barber who may know someone who knows a loc. Also write my Tan Oak people.
- San Luis Obispo is a blooming poor station as representative of weather conditions for South Coast Ranges. Change in Silva 2d ed. to some other town more typical of rainfall conditions. Rainfall excep. high at San Luis.
- There are no Big Trees in Yosemite etc The Big Tree room at the Sentinel Hotel.
- Pictures of trees in the Mariposa Grove desired.

July 4, 1911.

Big Trees.

Mariposa Tree 22 ft. 8 in diam. at 8 ft.* 293½ ft. high

Grizzly Giant. 21 ft. 5 in. diam. at 11 ft.** 224

Genl Grant, 23 ft. diam at 12 ft.

Genl Sherman. 27 ft. 5 in diam at 12 ft. 280 ft high

Tallert Tree in Grant Forest = 319 ft.

* Chapman. see supra.

** Cf. Silva Cal. for others.

— Simpson's Meadow - "the most glorious place for flowers in California" — Emma Gompertz.

Yosemite

Camp Equipment
Botanical

- Two fountain pens, so that if one fails to work the other may be used to fall back on
- If with a pack train take also penholder + pens + traveler's inkbottle
- Medium soft pencil + soft pencil. Ink eraser.
- Hand press straps should be of botany hard leather (harness stock).
- Knife should be attached by string. Perhaps chain is handier as it is more easily detached. Likewise

July, 1911.

the lens. – Wawona, June, 1911.

– Hatchet or axe should have a blade guard and be sharp.

– Stout irons 18 in. long with points save a lot of trouble and are well worth carrying. Stones are often difficult to get; the vessels do not set steadily on them and frequently tip over.

– The vessels for cooking, esp cooking rice should be deep. The cylinder type of vessels seem to me better than the skew pan proportion. I should rule out all skew-pans with handles and substitute a light kettle which should be low and with a cover, and taller vessels with pails. The kettle should also have a bail.

– Do not forget dish-clothes. A dish-washer with handle would also be handy. A place on saddle for cups. A can for butter and another for cooked fruit. – Three Rivers. Aug. 1911.

Butcher-knife, long-legged fork.

– Botanical texts, doesn't pay to travel without a flora.

Mauvna

Camp Equipment

Clothing

- Army shirt, brown, the real shirt can only be had by civilians when sold as condemned as at Sprai on lower Market.
- Trousers of wool khaki is probably the best thing. Coat of same material. Must be made to order. Secure material at Armstein - Simon's and take to tailor. The suit can be cleaned by Mrs. Huber and look as well as ever. It has the advantage of being light and does not show grease or dirt as the ordinary khaki. The army shirt is a fine color and has the advantage of being very near dust-color.
- Handkerchiefs. Bandanas or something similar is the only thing. I saw cowboys on the Yosemite Road that had particolored silk great handkerchiefs that in the heat of the day they slipped from the neck down under one arm and wore like a shoulder sash. Mrs. Huber has a Dutch Bandana, particolored with

July 1. 1911.

Wawona

design. This is cotton of very fine weave and she used it to cover her cutting hat.

Bandannas should be the large-sized ones. They can be used to pack a lunch, for towel, for neck cloth and night-cap as well as handkerchief. They wash out very easily. Many things like this are bought more easily in country towns than in Oakland or San Francisco where poor shoddy stuff is sold to city people.

– Literature – some thin light edition of standard work – there are times when one is stranded or held up in a place where a good book would be a God-send.

July 1, 1911.

Trees of California.

Corrections – 2d Ed.

– Short plates, Figs. 25, 26, give a bad appearance. It were better to put in extra plates as in Figs. 30 & 31.

– Fig. 69 ought to be the other way up.

– Fig 86 twisted a little.

– Fig. 83, transpose "a" & "b".

– Fig. 116b should be reversed.

– There should be a section on the ages of trees.

– Which is the tallest living Big Tree? Acc. to printed records and who is the authority? Who is the authority for heights in the Big Tree Grove at Mariposa?

Yosemite, July 3, 1911.

- Trees of California, 2d ed. Corrections.
- Hemlock in Marin County on Rock Spr. — Bolinas Trail. acc. Harold French

- North Grove destroyed acc. Foley's Yosemite Guide Book.
- "Grizzly Giant, 3000 years old." There should be a section on ages of California trees.
- Number trees in Mariposa Grove. See p. 127 supra. Cf. Supt. Yosemite Nat. Park's Reps. Cf. Leitch's "Big Trees" As to estimates for other groves ask Sanger Lumber Co. Send proof of Silva list + maps of groves.

Subjects for Students:

- Color in Eschscholtzia? due to leucoplasts or colored cell sap.
- The large horned Mistletoe of the Cottonwood should be germinated on the oak to test out diffs. between the two forms.
- Differences in color seeds of Lupinus names? in same pod or dif. pods on same plant.
- Orthocarpus densiflorus or purpurascens, heredity? white and purple flowered forms.

Plants of the Colorado R.

- Datura discolor + quercifolia.
  ? anthers. ? char. calyx – rim.

- Jack S. Douglas, a natural-born naturalist, his knowledge of the flora is almost perfect so says Clinton Miller. "He'd be delighted to see you" = [Rancho San Emigdio.]
- H. A. Jastro, General Superintendent of the Kern Co. Land Co, he's the whole show, he's dictator, Supervisor Kern Co, political dictator of Kern Co. W. S. Tevis a heavy stockholder. Also Haggin, but Jastro has the say.
- Truxton Beale owns the Tejon Ranch, a public spirited man, Bakersfield + S. F.

Subjects for Students

- Seedlings of our pines; the characters of recognition in seedling stage; conditions of growth. Why should we import seedlings from Europe? We must learn to do it cheaper here. And better. For home-grown seedlings ought to do better by a world of better growth.
- The divisions of Masters classification of Pinus as applied to California pines (Cf. Masters, Journ. Linn. Soc. Bot. 35, 560.)
- Localized stages in develop. of plants. Cf. Jackson, Mem. Bost. Soc. 5, 93.

Addresses.

- Mrs. Pruitt, 4001 – 16th st, Seattle, S.W.
- Miss Stanton, Mt. Hamilton
- Miss Hoby, " "
- " Ashbrook, " "
- Dr. Curtis, " "
- Dr. Aitkin, " "
- Frank Lieb, San Jose
- S.F. Leib, Judge, " "
- B.F. Leib, Jr, San Jose.

Sierra Club.

Mrs. Warren, Saratoga
Mrs. Bailey, Los Angeles
Mrs. Huber, Berkeley
Miss Julia Hamar, Lincoln, Neb.
Miss Laura Hamar, Lincoln, Neb.
Miss Hedwig Jessen, 1534 – 10th ave. (S.F.
Miss Matie Read,

Three Rivers.

- Irma and Marcella Britten, little daughters of Ernest Britten.
- Purdy, Forest Ranger
- Harry Britten, Park Ranger

The Fairies Good-night Benediction from the Midsummer Nights Dream.

1. Fai.

You spotted snakes, with double tongue,
Thorny hedgehog, be not seen;
Newts and blind-worms do no wrong;
Come not near our fairy queen.

× × × × × × × × ×

Never harm, nor spell nor charm
Come our lovely Ladage nigh;
So, good night, with lullaby.

2 Fai. *

Weaving spiders come not here
Hence, you long-legged spinners, hence:
Beetles black, approach not near;
Worm, nor snail, do no offence.

- Hermann T. Miller, Visalia
- Clinton E. Miller, Los Angeles 608 Grosse Bldg.

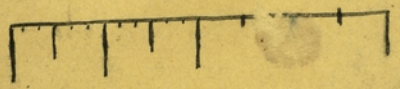
- Jack S. Douglas, Rancho San Emigdio.
- H.J. Jastro, General Superintendent Kern Co. Land Co.
- Truxton Beale, owns Rancho Tejon

483 1 doz. = $4.50. Sadler, 1907.

Prof. J. H. White, Univ. Toronto, Faculty of Forestry, Toronto, wants pines.

Texas Tree, left of ~~road~~ road ¼ mile) take trail + first meadow about 1½ miles from here.

C. W. Shuguist, Jamilon

Fowler Bros. Y.D. doesn't know about Cal. flowers.

Andrews, Chicago